Trails: First Generation

Fault Lines

Pair 1, Book 1

Gail Brown

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About the Author

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Acknowledgements

Dreaming science fiction was something that happened soon after reading my first science fiction book. For years, I wanted to write some. I once had a novel started, although, I never finished and lost the story decade ago.

A tremendous thank you to all who offer help that often you never see the results of. Years later, even decades later, those you help, will remember the assistance you gave.

May this novel assist others on their search for hope and acceptance in world often not designed for them.

Chapter 1

Parkfield, California

Amber shifted in her chair at the front of the geology classroom.

The teacher explained her version of the geologic history behind the 1906 San Andreas Fault quake.

Some of the myths were close to reality. Others made the news as a sensation at the time, and no one corrected the mistakes.

Amber groaned at one story in particular. Leaders knew the water infrastructure was too weak to handle fires, with no intention of updating lines. They even gave up a famous designer's dream plan of the city, both in the weeks before, and the weeks after the quake.

Behind her and Karen, the rest of the room couldn't hear the teacher. Students laughed, joked, and planned the evening's festivities. The high school spring dance tonight filled their hearts and minds more than a history they couldn't see or touch.

Parkfield nestled merely miles away, the epicenter of many of California's deadliest earthquakes. The others should be listening, regardless of the accuracy of the geology teacher's information. A paper plane whizzed by her head and hit the map near the quake's historic epicenter.

Amber's cell phone vibrated. She glanced down at the text message. "Increased activity. Will be in the field tonight. Pick you up to help us after school."

The teacher droned on.

Amber ignored her. It would be more fun to be at the research center, determining the current quake's epicenter, rather than stuck at home watching the computer.

She turned to Karen. "We are going to the field tonight."

"Great!" The bell rang, and everyone jumped up to go to the next class. "See you in an hour."

Amber sat down in senior history class. She never did well in history. Except on the ancient time scale, the history of science, especially geology.

The teacher rattled on about how Roman civilization survives in the current era. Laws and construction examples rambled into a jumbled mass.

Amber ignored her. The mountains and valleys of California had survived the ages of time. Today's series of minor quakes would have adjusted them, imperceptible to most. Any movement would affect the future. Out there, measuring, and predicting the next quake would be far more interesting than studying the people of the past. The month until her summer internship, stretched on endlessly.

"Amber?" The teacher raised her eyebrow.

Amber highly doubted the history teacher would ask her to explain geology to the class. It was easiest to confuse everyone anyway. "Mom is spending so much time in Parkfield. Lots of little earthquakes we may not even recognize. We should be thinking about how they will change our future, geographically, and financially."

"Earthquakes? They happen all the time. We ignore them," one person behind her said.

"There was a rumble a few minutes ago. Didn't you feel it? Scared you?" That boy lounged in his chair, feet sprawled in the chair in front of him, with his head on the desk behind him.

Her face didn't even turn red anymore as the class laughed.

The teacher didn't laugh. She shook her head and turned to someone else.

The release bell soon overrode the teacher's drone.

Amber's mom drove them to their study location.

Rocky walls glistened. Amber grasped her trowel and gently removed the outer layer of dust from the colorful lines within the rock. Swirls of color intrigued her to search deeper. By tracing their path through the rock, she could read their history. More swirls meant a highly geologically active region.

Her trowel hit an object. She sighed. Another arrowhead, most likely. Oh well, the archeological team could check, and she could clear another bank.

"Karen, call the assistants. I found something."

"Oh, what is it?" Karen brushed up against her, and peered deep into the grooves between the rocks.

"Not sure. Don't want them to yell at us for damaging something important." Amber leaned back. The archeological team had set up next to her mom and Brandon. There had been too many tremors of late, to skip caution.

Rocks skittered down the embankment to her feet.

Clutching the trees above them stood five teens from their senior class.

"Scared ya, huh?" One girl said.

Amber couldn't even remember her name.

The teen slid down the hill. "Jerry said you'd be here. He wanted to see Karen, no idea why." She laughed and sauntered off away from the work center, followed by her friends.

Jerry was the last to slid e down the embankment. "Sorry Karen. I said I was coming out here, and they insisted on following."

He glanced at Amber.

Jerry touched Karen's hand. "Can we walk, alone?"

Karen's face glowed red.

Amber turned back to the bank. "Not my decision. You better ask Brandon."

Karen grabbed her arm. "He'll never let me go without you."

Amber pulled back. "Tell him to come over with the archeology team. Mom won't be back for half an hour. You can stay on that side of the clearing, in sight, and out of hearing, if you really want to. And holler if anything important comes up."

Karen hugged her. "You're the best friend in the world."

"Uh huh. Hope Jerry's friends didn't destroy a priceless work of history."

"I'm sure they didn't." Karen grabbed Jerry's hand and raced off to the instrument mound in the center of the ravine.

Joking about quakes could be dangerous. It hadn't been too long ago, geologically, that where she was standing would have been deep inside the earth. She touched the twists that showed how the earth moved and opened the ravine. If not those specific twists, then ones very similar, and nearby. Pebbles had rattled loose by the earlier quakes from today. One level of soil appeared pushed up higher than last week's observations.

"Hey Amber, what'd you find?" Brandon asked.

"Good question. Probably an arrowhead." She pointed to the darkened earth. One of the archeological students looked the area over.

"Might be. Or might be campsite soil. I'll have to check it." The student eagerly grabbed her tools and set to work examining the dark lines. Her friends scribbled her words onto the paper to be transcribed later.

More of a wait. If only Amber could find something important about quake history, and unveil something no one else knew, then her mom and Brandon might take her more seriously.

"Let's check over here," Brandon said.

He led her them to another section still covered in plants clinging by thready roots to cliff walls. "Tell me what you think these swirls mean."

Amber sighed. At least Brandon included her, and wanted her to learn. This was her life's work, and she didn't enjoy explaining it to others, especially those who already knew what it meant.

Karen and Jerry sat in the sunlight chatting. Karen would check the dials on the machines, and monitor the equipment for changes. If a substantial quake occurred, she'd let them know. If Jerry didn't occupy her mind too much.

The archeology students a few feet away examined the dark patch of earth. They squealed with delight at whatever the find the signified. One pulled out a phone to save a voice file of time, location, and potential composition.

Archeology might be exciting, and it played along with seismology. Today, though, Amber wanted to focus on finding a fault line that would give her status at the research center for her summer paid internship. Not another arrowhead to add to the thousands already in the museum.

Brandon was Karen's dad, and her mother's significant other, wanted to listen to what she knew about the rocks and the visible fault lines.

A stick knocked down by the high school teens made a good pointer. She explained what each change in the rocks meant.

"This swirl may have been caused by the 1906 San Andrea's quake."

Amber's mom walked up and listened to her explaining to Brandon what she saw in the quake record.

"Do you remember what happened after that?" Her mom asked.

"Sure do. The town burned to the ground from a fractured water supply system."

Brandon hadn't been making comments as he usually did when he encouraged her, or Karen, to relate the rock's stories. He should have picked up on that exaggeration.

Brandon glanced to Jerry and Karen, and back to her. "You think he's okay?"

Amber rubbed her toe in the dirt. If she were completely honest, Karen would be in big trouble, and so would she. Then again, she didn't know anything for sure. Suspicions of what went on behind closed doors on some of his visits when their parents worked late at the lab, yeah. Facts, no. "He's okay, I guess. Typical teen male. No interest in science."

"That's what I'm worried about," Brandon said.

"Actually, the type of science he's interested in, is what we worry about." Her mom gave her a hug.

Amber's face turned red.

"Let's go interrupt them, shall we?" Her mom wrapped her arm around Amber's shoulder and led her to the center of the field.

Karen glanced up from monitoring the equipment.

Jerry tried to pull her away.

"Dad, you had a call."

Brandon grabbed his phone next to the seismometer.

"Activity is up again. Several small quakes locally; and an unusual pattern across the country."

"More data like the last few weeks?" Amber's mom asked.

Brandon closed his phone and picked up his pack. "They need us at the lab, now. The patterns forming are not a good sign. Come on girls, we better leave the archeology team to their work."

Jerry groaned. "My friends'll be back in five minutes. Can you stay that much longer?"

"No." Brandon said. "Come on Karen."

"You'll be at the dance, right?" Jerry called.

Brandon walked on up the trail and ignored Jerry.

Karen nodded to Jerry behind her father's back.

Amber picked up her backpack.

As they left the clearing, Jerry's friends clambered down the embankment near them. "Scared of a little quake? We can make the ground shake for you."

Amber shivered. Home would be far safer than in the woods with these characters. A few more weeks of school, and she'd be done with them, and those teachers who didn't know as much about the region's quake history as she did, forever.

Brandon drove directly to her and her mom's home. "Girls, go inside. We have work to do. We'll be home late tonight."

"What about the dance?" Karen asked.

Yeah right, like Brandon would let her go with Jerry now?

"Let her go. It's within walking distance, and Amber won't let anything happen." Amber's mom said.

Amber knew she'd try not to let anything happen. Karen was her best friend and should be by her side, not beside some guy. Of course, Jerry had said he'd find someone to dance with her. Hopefully, not some stinky ball player, fresh from that kind of field.

Brandon sighed. "Okay. Call me when you reach the school, and when you make it home, only the two of you. Understood?"

"Yes," Karen said.

"Sure thing. Thanks mom!" Amber closed the car door and ran to the house.

If their parents were going to work, so were they. They'd have to research from home, and quickly, before the dance.

"We have two hours." Karen locked the door.

Amber flipped on the TV to national news. She powered up the computer terminals.

Karen watched the television for a few minutes while the computers hummed to start screens.

"Any news?" Amber asked as she logged into the site her mom would send updates too.

"Nothing. Are they up?"

"Yes. Use my homework computer. I'll use my gaming computer."

"As if you ever played games on it," Karen said.

"Sure do. I play games that let me build my own solar system, or repair the earth after super earthquakes." Amber scanned her email for any important news.

Karen laughed as she sat down. A startled gasp came from her.

Amber turned to Karen's screen. The reporting site their parents worked for buzzed with activity. The stream logged real time comments and events, and neither of them could keep up with the lines of comments as they flew down the screen.

The comments slowed down.

The line blinked, waiting on the next report.

Karen sighed and leaned back. "If the event is over, I guess we wait. They'll be hours putting the pieces together. The epicenter couldn't have been too close, or too strong. We would have felt something if it had been. We'll have to fix dinner."

Amber clicked her keyboard. "You can order a pizza. I'm going to analyze the data."

She turned back to her own screen and pulled up the same site. She opened another window and pulled up a site her mom showed her the night before. California wasn't the only place with unusual readings right now. The scientists hadn't pinpointed where the other readings originated, or at least not as of last night.

Columns scrolled down the screen. Similarities between the earthquake and data in California and other regions of the country grabbed her attention. The pieces of the puzzle began to take shape. Danger lurked deep underground in several places, and may have been overlooked by people focusing only on their local area. Brandon had hinted at the idea.

Amber grabbed her phone and turned the speaker on as she dialed her mom.

"What, Amber? You should have texted. We have a lot of work to do."

"Mom." Amber's voice faltered as her finger pointed at the data.

"Yes?" Her voice lifted as she tapped something in the background.

Her mom sounded both hopeful, and annoyed. Amber gulped and tried again. "Mom, I'm layering the maps from last night. It's not good."

Static sounded in the background as someone interrupted her mom.

The background chatter stopped. "Yes. What do you see? I haven't had time to review yesterday's notes."

"It's important." The last map slid into place. Place names slid over the geological map, and over the recent earthquake data. "The

recent earthquakes are centered in New Mexico. The San Andres Northern Mountain Fault may be trying to fracture. They seem to be spreading there as well as here."

Silence on the other end.

Amber couldn't determine if her mom was annoyed, worried, or both.

"Amber, please save that file. Email it to me. Have you seen today's data?"

Amber gulped. "We saw it flying down the screen a minute ago. Karen and I haven't analyzed it yet. Where was it?"

"A tiny slip on the San Andreas. Keep Karen there with you. Have her run home long enough to pack a change of clothes, and return to our house. Keep her there." The phone clicked off.

Karen's face paled. She ran out of the house.

How could this be happening? Tonight I wanted to have fun and dance. Karen planned to dance with Jerry. And, Jerry planned to introduce her to one of his friends, maybe. Why tonight?

A buzz interrupted her thoughts.

It wasn't her phone, or Karen's. She checked both.

The buzz sounded again.

Pizza delivery was at the door.

She laughed as she searched for money. He probably thought she was crazy answering the door without it.

Chapter 2

Mount Kilauea, Hawaii

Unsteady rivers and streams of lava hardened in its search for the cooling waters of the sea. Soft spots formed, and rocks shifted as Alex slipped and slid across the flow.

Alex stopped on a hardened rock and glanced back. The impressions of his footprints added pressure and soil contamination to alter the lava's composition. Like an ant encased in amber, the soil would remain in the lava until it eroded. His dad published papers on it years ago.

Ahead a car sized, hardened volcanic boulder tilted at an unlikely angle on its journey to the sea. Over the decades since it formed, Kilauea's lava rivers raged around it, tugging it one way, or another. For now, it provided a resting spot in the active lava flows. Alex climbed to its summit until the rest of his dad's graduate student research team caught up.

The team scrambled through the lava flow maze. Half-cooled lava streams, with bits of fresh red lava oozed like pimples on the Earth's surface. When stepped on, they erupted, and let out the boiling liquid, to harden into sharp, tangled shapes.

Alex's pimple-covered cheek itched and stung at the thought. Unconsciously, he reached to scratch them. The pus oozed out, as his skin repaired itself. Lava-splattered gloves would damage his skin more. Later, he'd clean them out good. For now, he let his hand slide back down to his side.

"Alex." His dad caught up. "You shouldn't go so far ahead of us. Please slow down while we collect samples."

"Sure Dad." Alex grinned. "I'll wait, and move slow. Possibly being trapped by lava as it breaks through, rather than skimming over it."

His dad groaned as he sat down to rest a moment.

The graduate students fluttered around on the lava, taking pictures and samples to study back in the lab. One of the last field trips of the semester, most were steady on their feet as they scrambled about the field.

Alex had walked on this field all his life. Every visit with his dad and the students there were massive changes. When he tripped to avoid a lava bubble burst by a new student on her first excursion, it had sent him reeling back onto the scalpel sharp lava, leaving a jagged ridged scar. That had been twelve years ago.

He glanced down and verified his heavy pants were tucked well into his splattered heat resistant boots. A sharp splinter wouldn't sneak between his boot tops and pants today. He kept the broken tip they had pulled from his leg in his wallet. Any trip he went on he carried it for good luck to appease the Goddess Pele.

Lava, the embodiment of Goddess Pele, flowed steadily, as it had for years. Small quakes, unfelt by the casual observer prevented the furnace deep inside from skimming over and plugging closed. Each new flow added life and land to island. As long as the flow was steady, the volcano wouldn't erupt dangerously like so many others did. Unexpectedly killing plants, animals, and humans.

His dad meant well and wanted to keep him safe. Dad was all the family he had left. Better cheer him up by encouraging a story he knew well.

"Dad, how far are we from Loihi?"

The lava bubbled at their feet as the students came closer. Some gathered nearer the sea, a hundred yards away. Others rambled further inland, close to where the remains of a road were baked and transformed as lava flowed over and under it.

His dad shifted. "Less than ten miles from shore, and nigh three thousand feet under the surface. A blink geologically before Loihi's lava flow allows it to rise to the surface. Many human generations before it will surface. Someday, it'll rise, and seabirds will rest there. People will be able to see it from here. Maybe almost swim there, if Kilauea erupts long enough."

His dad's graduate students chattered as they clambered to a stop below the boulder. Insulated backpacks bulged with lava collected in tiny jars. Several stopped to rest and drink from water bottles carefully stored away from the collections. Tom measured the temperature in one nearby fresh split.

Alex shifted his own backpack and lifted his collecting tool. "I want to collect a few samples myself. My project is to compare Kilauea's lava that erupts on land, which later hardens in the sea,

with Loihi's lava that both erupts and hardens in the sea. I know you've done the experiment before."

"Careful son." His dad reached out. His hand dropped to his knees, and his eyes focused on the ground. "You aren't a graduate student yet. You don't have to take samples and run experiments."

The strained look in his dad's face meant memories of his mom, and how she died flooded the present. Mom had been his dad's partner as wife, explorer, scientist, interpreter, and recorder. Collecting volcanic gas readings last summer at Mt. Etna a quivering quake had unbalanced dad. She managed to prevent his fall; and in doing so, had fallen to her own death.

Dad had returned a shaken, broken shell, afraid to do the work he had spent a lifetime on. A serious limp had kept him out of the field one semester. Alex had led the class fieldwork then. Even now, Dad tottered behind him, unable to keep up. Whether fear or health prevented his normal push through the flows, Alex couldn't decide. The doctors said he was fine. Of course, how many of them had traipsed across the flows?

"Tom, when was the last quake?" Alex yelled to one of the graduate students, also his best friend since childhood.

Tom checked his phone. "Three hours ago, a 2.0. Should be safe for a while."

Alex glanced back at his dad. "I'll tie a rope around my waist. Tom can spot me, so I don't fall in. The waves aren't bad here."

His dad waved him on, with a wistful look on his face.

Alex slipped and slid through the loosened lava flow to the ocean's edge. A nearby spot would be easy to step into the water. A few streams trickled all the way to the sea here.

Tom placed his backpack on the boulder. He followed Alex down the trail, disturbing as little of the lava flow as possible.

A few feet from the ocean's rocky edge, Alex tied the rope around his waist. Here the lava had hardened several times as the streams shifted, always following the flow of least resistance. The edges were jagged and dangerous. A slip here could mean serious blood loss. No wonder the natives had used obsidian arrow points for generations before Europeans arrived.

Alex glanced down. His legs were still protected. A deep breath, and a moment later, he passed the line to Tom.

Tom stood ready to brace against the larger rocks if needed.

Alex visually checked the lava flow again. Eyes weren't enough here. If the cliffs were lower here, he could reach over and collect without climbing down. He'd have to slip down the embankment into the ocean. By climbing into the ocean, he could have his pick of stream exits to sample and experiment on. The water would lap the top of his boots. If he missed the hardened lava, and opened a fresh boiling stream too soon, he might land wrong on the jagged ocean floor. This was the lowest spot on the nearby beach.

Alex searched the ground, and the side of the seven-foot cliff with his lava collection tool. A fancy name for a three-foot long metal walking stick with an adjustable cup to collect lava samples.

The rope pulled tight. Tom waited, watching to be sure the jagged edges wouldn't fray the rope sending Alex to the bottom faster than intended.

Alex sat down and grasped the side of the cliff, to slide over the edge. His feet skidded across the moist rocky surface. Holding the edge, he slipped over, his feet finding the way his tool had shown by memory. He scaled down, no visible damage to the rope. His feet reached the ocean floor. Or what passed for ocean floor here.

Lava flowed openly from a vent nearby directly into the ocean, bubbling and hissing as it cascading into the cooler waters. This batch would make one good sample. He filled the cup, chalked a note on it, and stuck it in his insulated backpack.

A wave sloshed.

Steam billowed in his face.

His hands reached for the cliff to maintain his balance.

Lava that had never been exposed to air bubbled up through the remnants of former land based lava to form pillow lava.

Alex attached a second cup to his collection tool. Maintaining his footing was critical. To step in a pillow lava bubble as it burst could be deadly. A step forward and he reached below the surface of the ocean with nothing to steady himself.

Sample obtained, he stepped back. A look out to sea, he could imagine what Loihi would look like from here one day. Its mound slowly rising, invisible, deep under the waves. He stepped forward into the waves that splashed his heavy-duty boots. His collection pole steadied him against the current. The ground shifted and the waves lapped gently in the breeze.

The ground beneath him shivered slightly. Streams shifted around him. Most people would never notice. Walking on the edge of a volcano, his life depended on his paying attention to tiny details of the ever-changing crust.

"Alex, that was likely a 2.3," his dad shouted.

Alex nodded and turned around. His collection tool tested for firm areas to step. Lava shifted its flow after even a tiny quake. The climb back up the cliff didn't take long with Tom keeping the rope taunt.

Tom waited until he was a safe distance from the water to toss the rope back to him.

Alex dropped the collection cup to the middle hook, and used it to walk back to where the rest of the team was. His dad had evaluated the data of lava gathered from Loihi years before, and again last month. Now, Alex would compile and compare his data with ongoing research to determine what changes, if any, had formed in the Kilauea rock based on where it erupted and hardened.

Alex helped his dad walk back to the van. Stumbling over rocks he knew well was not a good sign. His dad barely lifted his head enough to see more than directly below him.

"Professor, tell us a story about one of your travels," Tom said from a few feet away.

His dad grabbed hold of his collection tool and stared off into space a moment. He nodded and launched into the story of an early trip to a volcano in South America before he met Alex's mom.

Tom and a few students listened closely as they hiked the trail back to the vans. Other students talked amongst themselves, ignoring the story. His father continued the story on the drive back to campus. He reached the part where the volcano vomited baseball sized chunks into the air as he parked carefully to avoid dumping the collection containers.

Tom waited for Alex.

All the other students would hurry to the lab room, leaving no open stations for them to work together. Alex's samples would have to wait until later to be tested. As a second year college student, he had no right to graduate lab space, or time, since he wasn't officially in his dad's class.

Tom's mom, a professor in the anthropology department, had given them access to her lab room as well. They could work undisturbed while her students were in the field.

Alex dropped the backpack down and sat his cooling lava samples on a teetering pile of papers. The mess on the lab tables indicated several simultaneous projects. Science was a messy business, and even with the clutter, this was home, surrounded by paper and equipment.

Plenty of evaluation equipment at his disposal without having to wait, as long as his didn't lose his notes in the mess. No coworkers meant no one to bounce questions, or ideas off of, either. Tom would work in here too, to keep him company. It wasn't the same as a whole class full of ideas and thoughts. Alex was used to theorizing on his own. He dreamed of sharing opinions with others to catch flaws in his own work.

Obtaining a full chemical analysis on the sample he collected would take several days. Alex pulled out the printout from last month's Loihi expedition. A scuba diving professor had taken a few graduate students with him for that trip. First time his dad had missed an underwater excursion. This report would give him something to compare to.

Tom turned on lights and machines to begin the experiments. It would be a long, quiet afternoon.

Alex cleared a space and set up the first few samples, labeling them with a marker and some string strung across the floor.

Sounds of classic country music flooded the room. Tom grinned sheepishly as he pulled out his phone.

Alex tried not to listen to Tom's short conversation.

"Alex," Tom said. "Your dad is looking for us. Some news he wants us to see. Guess your phone is off?"

Alex sighed. "It's on the charger. Can we leave everything here?"

"Should be able to. I'll tell mom it's here. Maybe Shelly will come in and finish for you."

Alex grinned. "Hope not."

Shelly tried to take over his projects, while ignoring him. Though, why she studied anthropology, when she wanted to be a volcanologist, was beyond him.

Alex sighed and sat the experiment notes under the equipment so they would be distinguishable to Tom's mom and her students.

They hurried to his dad's lab.

At the door, his dad tapped his foot, and held a paper. Noise and laughter billowed from the lab room behind him.

"Professor!" The words echoed from the room.

His dad handed Alex the page, and answered the student's question.

Alex took the sheet.

The notice covered a 4.5 earthquake in New Mexico.

A 4.5 would do some damage, to weakly built structures. Then he noticed the location, San Andres Northern Mountain Fault. White Sands, the nuclear testing grounds, contained this fault. Below was a list of more quakes, some larger, some smaller that had clustered in the same area over the last two days. The page slipped through his fingers. "They weren't testing were they?"

"No. Thankfully, nothing was being tested. There have been an unusual series of earthquakes in the general area the last few weeks." His dad shifted as he stood. Standing still too long took a painful toll.

Alex glanced back at the page. The San Andreas Fault in California had also slipped slightly. Many small quakes were clustered there as well. A starred note at the bottom lumped clusters occurring around the globe in an unusual steady stream. None sounded serious in the larger scheme of things, kinda like the quakes on Kilauea. Alex's neck prickled. He looked up at his dad.

"Son, the dormant volcano, Sierra Blanca is showing signs of a new bulge. There is also a recent uprising under parts of the Carrizozo Malpais lava flows."

Alex's hand dropped to his side, as his eyes closed. Earthquakes could trigger volcanoes, or volcanoes could trigger earthquakes. In some cases, they happened to occur together. "That's not good news. I thought the hot spots had shifted away from there."

His dad placed his hands on his shoulders. "That's what everyone thought. The volcano here is relatively stable. The semester will end in a month, then I could prepare to go. They need someone now. You are young, and you know almost as much as I do."

Alex gulped. "Thanks dad."

"I'm sending you and Tom, with all the data and equipment we can spare. We need you both. You're young, strong, and smart. You've absorbed plenty, and can call for assistance anytime." His dad stared into the lab room as he spoke.

Alex was surprised. The island had been his home longer than he could remember. Even vacations had been with both parents to nearby islands, never to the mainland.

His dad stepped back. "At the first sign of trouble, I want you to call, and come home, immediately. I don't want to lose either of you. The government wants to be sure trouble isn't brewing in the next few weeks."

Being at the cutting edge of science, it was Alex's chance to make a name for himself. The hallway spun.

His dad reached out to steady him. "I wish I could go. Guess it's your turn now."

"When do we leave?"

"Go home and pack. Be back in an hour. Your plane leaves in two. It will take your strength to help carry all the equipment. I can't do it anymore." His feet shuffled down the hallway with a tear in the corner of his eye. He paused to rest his knee, and limped back into the lab of excited graduate students. "I need," his dad's voice trailed off as several students nosily jumped to help collect equipment.

"Alex?" Tom whispered, placing his hand on Alex's shoulder. "I'll drive. We can both grab our stuff in no time." Tom called his mom as he fumbled for his keys.

Alex couldn't speak. Book knowledge, and the knowledge of Hawaii volcanoes, he had plenty of. Real field knowledge, he didn't have. Thoughts and emotions, unrecognizable, fluttered through his brain as he followed his friend down the hall.

Going to the mainland wouldn't be a pleasure hike across the islands. He grabbed shorts for the New Mexico summer sun, as well as another lava stained pair of pants. A picture of his mom and dad with him on Mauna Loa five years ago landed atop the pile of assorted clothes.

"Ready?" Tom hollered up the stairs.

Alex gulped as he looked around the room. The only home he had known. Somehow, it didn't look the same; as if he were seeing

it for the first time. It was the same as this morning, except for the bag on the bed.

"Sure," he said. "Be right there."

Curtains billowed in the breeze.

A chill spiraled up his spine. Alex grabbed his phone and charger, shoving them in his pocket. He picked up his bag and hurried down the stairs.

Chapter 3

Parkfield, California

"Amber! Karen!"

The sound broke through the depths of sleep. A distant light flickered on.

"Wake up! Where are you?"

Amber rubbed her eyes. She wasn't in bed, or on the couch. Her eyes flittered open. The sleeping bag rustled with her movement. A light blinked on the hardwood floor. Her computer screen flickered not far away. She tried to sit up.

The light from the kitchen shone eerily into the living room.

Karen had crashed on the couch after helping crunch the numbers coming in from the field.

"Mom, I'm here." Amber yawned and stretched.

"Where's Karen?"

Karen groaned from a few feet away. "Sleepy."

"Hurry girls. We took a short nap at the research station. Go pack. We are leaving for New Mexico in an hour."

"How bad is it?" Amber sat up and unzipped the sleeping bag.

"They had a 4.5. Instability, and pressure is rising. They want us there as soon as possible. We'll need your help analyzing the data."

With quake clusters at home in California, New Mexico, and several other places around the world, it was no surprise top scientists like her mom and Brandon were being called to investigate. Excitement urged her awake and up the stairs.

The clock read 11:30pm. There wasn't enough time to search for clothes she might want. Stashed inside the closet door was a bag packed for an upcoming weekend hiking trip, to explore a new section of a little known fault. She grabbed a few last minute things she might need, and tossed them in on top of her "Ring of Fire" pillowcase. Slinging the bag over her shoulder, she ran for the stairs.

"We'll be there in an hour," Amber's mom said into her phone.

Amber slipped down the stairs and slid across the floor to her shoes by the couch.

Karen sat nearby, waiting on her dad. "I don't want to go. The quakes might become worse."

"Karen, you need to come. Who will I talk with while mom works?" Amber pulled her shoes on.

Karen pulled the pillow tight to her chest. She glanced at Amber pleading, "Please. Someone has to stay and watch the houses. Taffy is due to have kittens any day now."

The pillow slid down to her lap. "What about school? I can email assignments and notes to you."

"Oh no, the science test Monday, it's almost half our grade." Amber's shoulders slumped. "Mom, this trip is a chance in a lifetime! Maybe Karen can set it up so you can watch me take the test online?"

Amber's mom nodded. "Karen, you've never stayed alone before."

"Please?" Karen begged.

"It's short notice, they might not set it up." Amber's mom looked at them both.

Brandon walked in the front door carrying his suitcase and an extra bag. "Karen, I brought some clothes for you."

Karen groaned and grabbed Amber's arm.

Amber's mom eyes brightened when Brandon walked in the room. Someday, they would marry, if Amber's dad never returned. Brandon was a nice person, as well as the father of her best friend.

"Mom, please." Amber said. "Karen needs to stay here for Taffy, and I can go with you. You won't have time to cancel the mail, or utilities. You've no idea how long we might be gone. Karen can come out later."

Her mom sighed, and rubbed her forehead. "Brandon, I know we don't want to leave either of the girls behind. Karen wants to stay for school and Taffy."

Brandon dropped his bag on a chair. "Karen, please. Not now."

"Please dad. Someone has to keep our homes safe. I can take care of everything. Most teens our age are preparing to live on their own in a few weeks anyway. Think of it as a trial run. It's safer here than there right now, they have nuclear weapons." Karen begged with her fists under her chin.

Brandon sighed. "If you insist. Keep the doors locked when you are in either house. Be safe. Go to school, and come straight home.

Keep in contact as much as you can." He walked up to his daughter and placed his hands on her shoulders.

"Don't you run off now. Be careful." He hugged her close.

Tears in her eyes, she nodded. She picked up her bag from earlier in the evening. "You better be going. You have a plane to catch. I'll stay here until morning. Call me when you arrive." She ran to Amber and hugged her.

Karen pulled out a picture as she followed them out the door. It had to be of Jerry. Karen couldn't leave him behind. She loved him. And wouldn't dare risk her life, and their future together.

Amber waved as the car pulled away.

Karen waved back. The light from the open door shimmered behind her.

At the local private airport, her mom and Brandon showed their personal, and seismologist identification.

The clerk pointed toward the smaller waiting area. "The plane you are waiting on will be here in a few minutes. Coffee is available if you want."

Amber wandered over to the viewing area. The dust-covered windows were streaked with an oily shimmer causing moving lights to dance in unexpected patterns. Her finger traced the lines, as many others obviously had. Straight lines, that only broke across fingerprints.

Her mom and Brandon went to the coffee pot. Their whispered conversation lulled Amber into a dream like trance.

The night sky fascinated her. Landing lights at the main airport, a few miles away blinked on and off in the night, as planes landed and departed. It amazed her how the pilots could maneuver, and remember what each type and color of light meant. Piloting in daylight could be even more difficult at times, without the lights to guide and direct, in foggy, windy, or rainy conditions. Trying to line up a jet with a runway in the fog, or a thunderstorm, took a skilled pilot with plenty of support from their team. She'd seen examples on TV, and in their travels, of jets trying to land on quake ridden runways. Not a pretty picture.

"Amber do you see anything?"

"Not yet." Amber pulled her hand away from the window and sat in a nearby chair. She rested her backpack on the floor between her legs. Everything she owned that mattered was with her.

Everything except Karen.

Karen had chosen Jerry over her.

The wall window glowed and flickered as lights outside crossed it and travelled on their way into the distance. Jets ascended and descended at the larger airport. One set of lights turned in their direction, and didn't change course. "Lights are coming. They seem closer than the others."

"That's them," the clerk said. "You should be able to go out in a few minutes. You might want to use the restrooms before you go. Not sure if they'll take the time to refuel."

Amber followed her mom into the tiny women's room. The dim overhead light yellowed the walls, and hid dirt. Lack of light couldn't hide the stale odor of a place as old as her and her mom together.

Amber held her nose, and kept her backpack off the floor.

"Hurry." Her mom washed her hands and held the door open.

Amber pulled her bag closer and followed her mom and Brandon down the hallway.

A guard opened the door to the tarmac.

Another guard escorted them to a small plane.

The internal staircase rolled out of the running plane.

Amber took a deep breath. Once inside the plane, she let out the last Californian air she would breathe for some time.

Two young men reclined in the front seats. She walked back behind them; far enough to let her mom and Brandon talk privately to these other scientists. After all, she was merely along to help organize the data they found.

She pulled out her phone to turn it off for takeoff. No messages from Karen. Normally, Karen would have texted her. She wouldn't cry that her best friend had abandoned her for a boyfriend. Brandon and her mom had no idea how close Jerry and Karen were. If they knew, they'd never have allowed her to stay behind.

Amber ignored the murmur of voices as her mom and Brandon spoke to the two young men.

The plane rolled forward. The movement pushed her backwards against her seat.

She closed her eyes until the plane leveled out, and the jarring awareness of speeding through the air stopped. The clouds slipped by. The physics of flying was one science she would never comprehend. Earthquakes, and their aftermath, were easy to grasp.

"Amber come sit up here so we can discuss what information we have so far." Amber's mom said.

To stand and walk required balance beam skills, something Amber hadn't mastered. The seats swayed side to side as she stepped. She toddled forward unsteadily, and plopped down behind Brandon, who was on the aisle next to the two strangers.

"Hi Amber. I'm Alex, and this is Tom. What do you bring to the project?"

"I'm along to help mom and Brandon. I watch, dig, and crunch the numbers."

Amber's mom laughed. "Don't be so modest. You know almost as much as we do, and you can compute the information quicker."

"Relax Amber," Tom said. "We aren't that much older than you. Do you want to work with us at the volcano fields?"

"I haven't been to one in a few years. I study earthquakes, and how they affect the environment." Amber glanced from one to the other.

"Plenty of quakes occur near volcanoes. Maybe you tell us whether any we recognize are faults, or volcano growth?" Tom said.

Amber blushed.

"Your mom seems impressed by your map overlay skills," Alex said.

Amber closed her eyes and remembered the map, as easily as her embroidered pillowcase. "Creating it in my mind is easy. I know how to use the technology to make it visible for others."

Alex and Tom looked at each other.

"We need that on our team too," Tom said. "It's up to your mom."

"Well," Brandon said, "I think we'll see what new information they have for us on the ground when we arrive."

He reached over to pat Amber's shoulder and chuckled. "Wouldn't want Amber to feel torn between her family, and new friends."

Amber hid her face. She wasn't sure if they were friends yet. Alex and Tom might be nice; she'd have to give it time. The seat leaned back comfortably. A nap would prepare her for the coming day.

Alex and Tom discussed the latest reports that mom and Brandon had brought them. Apparently, Hawaii was experiencing stronger clusters than usual as well.

If they needed her, they'd wake her. Questions required rest to answer. She turned to one side and closed her eyes.

Chapter 4

Carrizozo, New Mexico, The Valley of Fires State Park

The rumble of the plane changed. Amber woke to light shining in on her face.

She stretched and woke her mom. "Mom, we're almost there."

Her mom grumbled and reached for Brandon's hand.

The descent was even more jarring than the ascent.

At last, her stomach quieted.

With the plane on the ground, Amber could breathe deeply again.

She checked her phone. Still no messages from Karen.

The group exited the plane.

Amber followed behind missing a friend to joke and laugh with while their parents did the serious business of science research.

An airline employee pulled a cart loaded with seismometers, and other equipment Amber didn't quite recognize. The volcanologist's equipment would be specialized, and different from what she had assisted her mom with.

Amber waited and checked her phone again while the equipment was loaded into the van.

"Landed safe," she texted to Karen. Before when she had traveled with her mom, she'd have a dozen texts from Karen by the time she landed.

After all five people settled into the van's seats, the driver turned to the group. "Hi, I'm Corbo. I'm taking you to The Valley of Fires State Park. There, you will meet with Dr. Rebecca Sage from the New Mexico Tech Seismographic Observatory." He turned the key, and the van lurched to a start.

Amber smiled. Dr. Rebecca was well known in the field, and had visited the Parkfield site a few times to work with her mom and Brandon. Her papers had ignited Amber's dreams of finding a better way to predict quakes and their potential damage. Dr. Rebecca might remember her from a visit a few years ago. Of course, she didn't look, or even talk the same.

The change of scenery was refreshing. Amber clutched the window frame. Airplanes were too stifling to enjoy the panoramic view.

The quakes in New Mexico had been low magnitude so far. Damage wasn't visible from a moving vehicle. Or, at least to someone who had never seen the area before.

The State Park entrance loomed ahead.

Corbo parked the van in front of a mobile home. The wheels and towing rig still attached. Truck tracks pooled with water back to the main trail. Shrubs and grass flattened and pushed back from the weight of the truck cab. Water and electric hook up lines snaked from the back end of the trailer, out of sight into the grass.

The work trailer reminded her of the one her mom often used in Parkfield. Or, the one where they stayed off the Hayward Fault for a few days over spring break.

During the spring break trip, she and Karen laughed, giggled, and explored the fault, pointing out fractures and signs of movement to their parents. Karen was almost an extension of herself. Amber would have no one to share stories with around a campfire, or as they drifted off to sleep. Amber was alone with her mom, Brandon, and two young men she didn't know.

Sometimes their parents were tense as they read the data and tried to organize it with known data points. Karen was always the first to recognize too much tension and break it up with a joke.

Dr. Rebecca opened the door to the work trailer. Her face was lined, and pale, more withdrawn than Amber remembered. She spent too much time at her computer crunching data, and not enough out in the field collecting the updates. Her students did most of the fieldwork, leaving her to teach them how to interpret it when they returned.

Amber grabbed her bag, and hurried up to Dr. Rebecca.

"Hi everyone. Hi Amber," She patted Amber's brown curls. "Please, call me Rebecca. We won't have time, or energy, for social complexities. Come on in."

Dr. Rebecca treated Amber like the child she was years ago. It stung almost as much as Karen's abandonment. She held her head high, and tried not to sniffle. Thankfully, her mom said she would be a great asset for the team, not only someone to watch out for. Hard work, finding answers, and being responsible for her equipment

should change her opinion. After all, this summer, she would join the Parkfield team as a paid assistant. Or maybe, she was one now, she'd have to ask later.

Dr. Rebecca led them inside.

The well-equipped trailer would be their base, and could be moved anywhere a truck could go if needed. Six computers with blinking screens waited on desks bolted to the floor. Chairs pushed under in a clear walkway, at the moment. A kitchenette nestled off to the side, with a pot of coffee already brewed. The comforting aroma pulled Amber to the small fridge.

Dr. Rebecca helped Alex and Tom carry in equipment. "We keep the furniture bolted to the floor, so it's ready for the earthquakes, and whenever we need to move it to a new study spot in various fields. The students work in the trenches, while I teach them how to analyze the data in here."

She pushed an office chair out of the walkway. "Be sure and lock the chairs into position when not using them. We have another trailer coming, to be placed behind here, for sleeping accommodations. If anyone takes the time."

Amber grabbed a caffeine free soda, and rejoined the group. She dropped her bag next to one computer, smaller than the rest.

Dr. Rebecca glanced up from shuffling papers on the snack bar. "No Amber, that one's for me. You need the biggest monitor in the back row over there. Lots of memory, and the ability to view multiple projects at once will help us all. Your mom and Brandon will be beside me, and Tom and Alex will be on either side of you. They have of plenty of programs set up as well. I figure you will want access to both your mom's data, and theirs. We need you to combine it all and help us determine the full picture."

"That'll be fun. I enjoy helping in any way I can." Amber laughed as she pushed the hair out of her eyes. It was easy to show her knowledge in front of Karen, the others at school, or even her mom. In front of scientists she didn't know, her heart quaked. She was used to the scientists at Parkfield. One more practice for the real world she hoped to join in a few weeks.

Dr. Rebecca stretched her hand out, as if she wanted to pat Amber's shoulder. "Sure dear, like you helped your mom the other day. We need your technological expertise to combine everything. We've all been focusing on one place to long. We might miss a

variable that the two young men may share with you easier than we might hear it. After all, combing volcanic and seismology data requires creativity."

Amber blushed. Creativity wasn't exactly her strong spot. She clarified and cleaned up the efforts of others, pointing out things they neglected to mention.

Alex took the chair on right side, and Tom her left.

The computer flashed in front of her. A printed list of programs and passwords had been provided for each of them. Amber checked into the station her mom and Brandon worked for. Nothing relevant was instantly visible on the earthquake sites. "Alex?"

"Hmm?"

She opened the volcano site on her list. "What am I looking for?"

He reached over and gave her a few pointers. The volcano sites presented much of the same basic information, in a slightly different format, and focused on different specifics. A few minutes passed as she compared the new site with the ones she regularly used. Although activity was certainly increased, its level and intensity was nearly within the normal, or expected range.

A bang rocked the trailer. Glass rattled in the kitchen and windows.

"Hope it was the sleeping trailer," her mom said.

"Definitely," Tom said.

"Nope." Amber clicked back to the earthquake sites. "That was a likely 4.5 not far from here. Probably in the San Andres again."

A light thump sounded.

Dr. Rebecca glanced out the window. "That is home sweet home away from home. Let's give the numbers a few minutes to digest, and go pick rooms. We may not have time later, and we have field work to do."

Amber swiveled the chair around. "Alex, any changes on the volcano site?"

"Nope. Kinda glad at the moment." He reached to grab her bag as well as his.

"No thanks. I can do it myself." She jerked it out of his hands, heart thumping. The zipper opened, and her "Ring of Fire" pillowcase spilled out the top.

He shrugged. "If we are here, we can help."

Amber smiled back. "No offense. How would I keep my strength up to do my job, if someone else did the lifting for me?" She hurried after Dr. Rebecca.

Choosing her room was easy. Since she was alone, she chose the smallest. Amber took a moment to make the cozy room homey. She threw her bag on the bed, and pulled out her "Ring of Fire" pillowcase. The fading lines her grandmother had cross-stitched begged to be touched. When the tiny x's had begun to pull out, Amber turned it into a relic. It waited for her on her pillow when she came home, no matter where home was. A reminder, of who she was, where she had been. Her hand rested gently on it, smoothing out the lumps.

"How appropriate." Dr. Rebecca stood in the door.

"It makes anywhere home. Glad to be here, with you. I hope to learn a lot." Amber's hand rested on the pillowcase.

Dr. Rebecca smiled. "You will, and so will we. Meeting in five minutes." She hurried on down the hall.

Alex and Tom talked in the small room next door. Any conversation could be heard by everyone though the paper-thin walls.

Holes dotted the bare room walls, like a giant connect the dots puzzle waiting to be completed. Whoever had used this room before hadn't left anything behind. All her geology maps, and a horse poster, had been left in Karen's care. Empty walls shouldn't matter. At night, she'd be too tired to look at pictures anyway. She strolled back to the computer room in the main trailer.

Her mom and Brandon sat down with their coffee, and glanced at her as she stepped into the room.

"Hey Amber, hear from Karen yet?"

She shook her head.

Alex and Tom sifted through their equipment.

Dr. Rebecca paced, nervousness showing in the lines in her face as well as her inability to sit still.

Amber checked the status update on her computer. The quake data poured in as places further away reported the shaking they had felt. The epicenter would be pinpointed soon, if not already.

Her phone was silent. No messages, no calls.

The door opened, and Corbo walked in. "Hi. Sorry I'm late. Phone call." He sat on a chair off to the side.

Dr. Rebecca began, "Okay, we are all here to work together. In order to do so, we will work in smaller groups, and bring our information together. We need to know, is an eruption imminent, and will it be quake, or volcanic in nature? Corbo will be our primary van driver. Alex, you, and Tom need the van for your monitoring equipment, correct?"

Alex slipped the cover over some equipment. "We will need help tomorrow, or maybe today. We have equipment to set up, and need a vehicle to move it closer to the data collection sites. If Amber wants to come with us, she is welcome to."

Amber blushed, and almost said no. Supposedly dormant volcanoes would be fun and exciting to learn more about. Trying to piece the up to date information with her mom and Brandon's study of the faults would be an asset to the team. "Sure. If you don't bite."

"Only if you do first." Tom laughed.

"Okay." Dr Rebecca said. "If Claire and Brandon agree, and you three work without flirting too much, it would be a great idea. We should meet back here, and stay in contact by phone, though phone service is spotty at times. I'll take my car for the three of us today. We'll be going to White Sands National Monument. Lots to see and do. Grab a few last notes, and let's all begin."

Amber shook hands with Brandon and hugged her mom. Her mom hugged her tight. "I'll be fine mom. They seem okay. Good luck today!"

"I wish Karen had come," Brandon said.

"I'm glad she didn't. It's too quiet here." Amber raced back to grab her supplies for hiking. Her pillowcase nestled on the pillow. Her fingers slid across it, and almost left it. She grabbed it. No matter that they were supposed to be back tonight; whenever hiking in strange country, always be prepared.

The door slammed shut behind her as she raced to the van.

Chapter 5

Carrizozo, New Mexico, The Valley of Fires State Park and Sierra Blanca

Amber checked her phone for a message from Karen.

Nothing. Karen wouldn't be beside her to watch the numbers typed into the computer. Sometimes, they reversed themselves and her answers didn't match expectations. Karen always found the mistake and pointed it out.

Amber climbed into the van and slid into the middle seat. Backpack between her knees, she wrapped the phone in her pillowcase and zipped it shut.

Alex rustled the map as he opened it.

"Where are we going today?" Corbo started the van.

Alex rotated the paper map in his hands. "Let me find Valley of the Fires."

He paused a moment as Corbo drove to the park gates.

"We need to go to Sierra Blanca first. It's further away. Then, tomorrow, we may have to hike through the Carrizozo Malpais fields to decide where best to place the other equipment." Alex folded the map up into a wrinkled square. "Of course, as new readings come in, and things change, we may have to move the monitoring equipment."

Amber reached over, grabbed the map, and refolded it neat and square. She slipped it into her backpack under her phone. "I'll keep the map. Wish I had printed up to date geological maps of the area."

"We can do that tonight, or maybe Dr. Rebecca has one we can carry with us. We really didn't have time before we left," Alex said.

Corbo drove southeast from the park towards Sierra Blanca.

Amber observed the scenery along the way. Two days ago, she had watched a documentary about The Great Inland Seaway, which had once submerged this area. She recognized a few rock formations that resembled the ancient coastlines, from the show's maps estimating the shores of thousands of years ago. If the faults continued splitting, it could return, drowning the military base lands.

That should take millions of years, based on most current scientific thought. Quakes in the wrong place at the wrong time, could cause instant change.

She tried to imagine how this desert like landscape would be altered if water permanently returned. It would modify far more than the land. It would change the people too. How, and where they lived, would have to be adjusted. Some alterations would occur instantly. Others might progress for years before reaching a stable point. A house built next year might be underwater in five, or maybe a hundred, depending on rain, and snowfall to the north.

The airport brochure map of the region was a colorful touristy type. Not geologically complete. Dots represented the volcanoes, and volcanic fields. Lines portrayed major known earthquake rifts. The San Andres Fault was in the middle, with a half ring of extinct volcanoes to the east, a large volcanic caldera to the west, and a supervolcano to the north.

"Alex, how much do you know about the interaction of volcanoes and earthquakes?" Amber asked as she glanced up at him.

"Probably as much as you. What are you thinking?"

"The volcano sites, with the major faults splitting several volcanic zones are not a good picture. One strong quake in the wrong place could set off a massive chain reaction." She handed the brochure to Alex.

Alex studied the map. "Dad thinks all the little quakes have caused magma chambers to rebuild in places where everyone thought the hot spots had moved on."

"Are there many?" Amber asked.

"That's what Tom and I came to verify. I hope the equipment that measured the lower magma levels before was malfunctioning, or not strong enough for good readings. If not, there have been massive changes." He drew lines with his fingers on the map.

Alex let out a low whistle. "Dr. Rebecca knows how the faults wrap around the volcanic areas. I wonder what she thinks."

Amber leaned over the map. "She didn't say. I guess she is more worried about the earthquakes at the moment, than the believed extinct volcanoes. Even though there have been a lot of tremors lately, they haven't been strong enough to make national news."

"The government is worried, or they wouldn't have called for all of us to come help Dr. Rebecca." Alex raised his eyebrow.

"White Sands, and so many other places are in danger, to themselves, and to the communities, if the quakes worsen." Amber took the brochure back.

The earthquakes so far, had been low magnitude. Small signs of earth movement were visible, though most people wouldn't recognize them as such, without special training. Stones had adjusted position, small rock falls under hillsides, and even plants showed signs of geologic stress. The trees on one embankment hung upside down by roots, the leaves beginning to curl.

Corbo pulled into a space at the edge of a hiking trail. "This is as close as we can drive."

Alex opened the back door.

It would be a long haul with the seismometers.

Corbo pulled out a small wagon to carry some of the equipment. "The trail is steep in places. We'll all take turns."

He and Alex loaded the equipment into the wagon.

"I'll pull it first," Amber said.

Everyone carried what they could in their backpacks, and started up the trail.

"How far up?" Corbo asked.

"We need to place the seismometer as close to the peak as possible. This is one sleeping volcano I really look forward to seeing. I haven't seen many extinct volcanoes," Alex said.

"Didn't you travel all over the world studying them?" Amber asked.

"No," Alex shook his head. "Mom and dad went a lot. They left me in charge of the field in Hawaii. I've only actively studied Hawaiian volcanoes."

"Surely, you've studied others." Amber stopped on the trail. This wasn't good. If he only knew a few volcanoes, why had they sent him?

"Oh sure," he turned to her. "Reading, seeing pictures, and even video isn't the same as being there. The noxious, deadly odors of the various gasses are missing. Dried lava beds, some rough as a sponge, others smooth and slippery under your feet. Pictures don't let you see and appreciate the depth, and beauty of what's left of the volcano. The local's tales of their homes being swallowed by

lava are all second hand. I couldn't ask the locals questions that mom or dad didn't ask for me. Maybe they would have told me something that my parents missed, or didn't think to ask."

It must have been devastating to stay behind during events as they occurred. And to miss the real life stories, those had always been her favorite part. Even the time the elderly grandmother told of being sixteen and losing her first child in a mudslide caused by an earthquake. "By the time I was four or five, mom and dad took me on their trips, I reckon."

"Sure. Earthquake studies are different. They have already happened when you explore them. Volcanoes could erupt at any time. Sometimes the extinct ones wake up unexpectedly as well, though fewer people study them."

"Earthquakes repeat too, and there are more warning signs with volcanoes than earthquakes."

"True. Mom and dad might camp out for a month or more. They preferred researching active volcanoes. They couldn't leave the equipment at the top of the volcano to take me to safety. And they wanted to be in the action. That's how mom died. If only she had liked sleeping volcanoes, I might have been able to go along." His head drooped.

"I'm sorry. I didn't know."

Alex's voice quivered as he said, "Dad can't hike anymore. So he sent me. I have all of their knowledge, though not their life experience. And more than many graduate students, except Tom, of course." He stopped for a moment.

Amber reached out to him.

Salsa music blared. Corbo grinned as he answered his phone. "Sure, Livia. We are on the Sierra Blanca Peak. Not sure when we will be back at the camp. Okay, see you later then."

Corbo turned back to everyone. "Sorry about that. My girlfriend, Livia, doesn't like it when I miss a rally. She won't be happy. That's okay though."

"What kind of rally?" Amber asked.

Corbo closed his eyes. "A group of people who gather and talk religious nonsense."

The sky, trees, and nature all around were the only religion Amber needed. There didn't seem any point in talking about it to others.

"How long is the hike, do you think?" Tom said.

"A couple of hours. Maybe longer with this equipment. Amber, you may want to trade off. Don't want to wear your arms out," Corbo said.

"I'll take it," Alex said. He reached for the wagon handle. "Let's rest for a minute, so Tom can take my pack too."

"Wish we had a mule, or even a large dog to pull the wagon," Tom grinned.

"Not a bad idea," Corbo said. "I may be able to find a dog for tomorrow, or whenever we do the lava fields."

"Do you think we need to put a seismometer in the Datil-Mogollon Volcanic Field, or the Aden Lava Flows?" Amber handed Alex's pack to Tom. Though heavy, only her pack would be a break from the loaded wagon jerking her arms on every bump and twig.

Alex pulled the wagon around a stand of young trees in the middle of the path. "I don't have enough equipment with me. We'll check with Dr. Rebecca, and see if she can find some more equipment to set up. Maybe have some of her students place some up there. We need all the help we can find, in a hurry."

Chapter 6

Sierra Blanca, New Mexico

The Sierra Blanca mountain peak loomed ahead. Trees and brushy plants covered this mountain, to locals. A waking, growing volcano in reality. Most noticeable to Alex was the absence of creatures. Ants and bugs crawled in the leaves and across the trail. Nothing larger rustled leaves or twigs. Birds and squirrels had disappeared. Stifling silence met them as they hiked up the slope.

The two-hour hike was in some ways easier, and in others more difficult than Hawaiian volcanoes. There was no breeze to rustle the leaves, or cool the forehead.

Corbo took the wagon after half an hour. He huffed and puffed his way to the front of the line.

Tom didn't wait long, before he took over.

Corbo grinned and dropped back behind.

Amber danced along at times, where the sun beamed through the trees. At others, she pulled her backpack into arms and held it close.

Alex walked behind her as much as he could. Her excitement was contagious. Something obviously bothered her, and he'd have to find out what. Maybe a boyfriend she didn't want to leave behind?

The trees thinned. The peak of the sleeping volcano rose to meet them. No visible caldera in sight. Overgrown with trees, bushes, and lived in by animals for thousands of years. Perhaps it was visible on a satellite map.

Tom pulled the wagon to a stop.

"Over there would be good." Alex sat Tom's bag down. He helped Tom lift the seismometer.

Stillness echoed.

The ground vibrated.

Trees and rocks shook.

Stones tumbled down the slope.

The wagon rolled into Corbo's leg.

The seismometer slipped.

Alex and Tom fought to steady themselves and the equipment. Only a few feet from where they wanted it, they managed to stay almost upright and set it on the ground safely.

Alex collapsed on the ground and drew a deep breath. He checked to be sure everyone was okay.

Amber had landed on her hands and knees behind Corbo.

Corbo rubbed his shin, where the mostly empty wagon had struck. "I'm okay."

"Not a strong quake. Too much movement on an unbalanced hillside," Tom said.

Amber stood up, shakily. "Dangerous for sure. Glad we were at the top and none of the rocks could fall on us." She swiped at the dirt on her legs.

"Amber, can you bring Tom's bag and mine? I wish we could have recorded that one." Alex sat up from his awkward position on the ground.

Amber put her bag down against a tree and carried the other two bags over. She sat beside Alex.

Alex and Tom steadied and prepared the seismometer.

Warmth beyond the heat of the day flooded through his veins. He had worn shorts on the plane, and hadn't changed. Thankfully, this was not an active volcano, and lava couldn't splatter his legs. The scar on his leg pulsed from the adrenaline rush. It sure felt like an active volcano at the moment. He glanced up to see Amber watching him and the equipment.

He blushed and turned away.

Brandon and Amber's mom had brought a few of the seismometers they used. Almost identical, they were set to monitor different frequencies.

Alex programmed the GPS station to verify changes in spatial readings. The satellite would update them regularly. Any height difference in the mountain would indicate change that needed to be verified in person.

Tom set up the atmospheric monitoring equipment. Various gases and temperature changes would be recorded with it, and transferred to the satellites as well.

All this high tech equipment would remain on the mountain, so humans wouldn't have to. So much could affect the equipment, especially rain, solar storms, quakes, magma, animals, and other

humans. Hopefully, the equipment here, and the other stations they would set up, would show that the government's worry and concern were unnecessary.

Alex verified that the monitors were stable, and as protected from the elements and falling tree limbs as possible.

Screen readings flicked on. Everything was up and running. "Normally, I would wait to obtain a range of readings. That quake, probably a 3.0 makes me nervous. Let's hurry back down the mountain."

Tom put his hand on Alex's arm. "I want to be down as fast you. For safety, let's have a little water and a snack first."

Alex sighed. "You're right. Holding onto that wagon, even empty, all the way down will take energy." He sat on a rock, and opened his pack to pull out some dried fruit and nuts.

The landscape of trees, mountains, and desert was like a picture out of time. No sign of humans anywhere. They could be the first people to have ever set foot here, even though the well-worn trail was only feet away.

Amber munched her own snacks. "Beautiful. I'm afraid it's going to change forever, and we'll be here to see it."

Alex laughed. "Most people would think that was a good thing. Being able to see the change as it occurs, that is."

Amber's lips curved. "They have no idea the damage an earthquake can do, or a volcano for that matter."

He shoved the food back in his pack. "True enough. Everyone ready?"

Salsa music filled the air.

Corbo shook his head and answered his phone. "Yes Livia. I'm okay. No, please don't come. Not right now."

Alex took the wagon handle and started down the mountain trail.

Corbo caught up and took it from him. "Better hurry, she might show up."

Chapter 7

Sierra Blanca, New Mexico

Amber picked up her pack. The scenery belied the danger that lurked inches under the ground cover. One last glance at the monitoring equipment, and she turned to follow Tom.

Corbo lead the group down the trail they had come up, allowing the empty wagon to roll in front of him for now.

Alex reached for a leaf on a tree. "In Hawaii, people walk on freshly cooled lava all the time. People think it's fun. A good way to spend a vacation day. Not all volcanoes are that way though. The ones around here weren't when they were young."

"I imagine not. The earthquakes, the Rio Grande Rift Valley, and hundreds of faults cover what people think is a stable region. Hundreds of unknown or unstudied faults, concern me." Amber leaned against a tree to steady herself on the uneven trail.

Alex reached for her hand. "Try not to worry. There is nothing we can do to stop one. We can only hope to predict it."

He gazed up into the trees. "Or let Mother Nature predict. I think she's trying to tell us something big is happening now. The birds, squirrels, and rabbits have listened. The question is; will we?" He looked in her eyes, held her hand, before he turned back to the trail.

Amber wasn't sure what to do. She had barely met Alex a few hours before. No boyfriend had ever held her hand before. Karen had always been the one with a boyfriend. Earthquake ravines were far steeper than this trail, and she'd navigated those without incident. Heat raced up and down her spine, and breathing was far more difficult than it should be. Quakes had never affected her this way. Somehow, having her hand held was comforting, in a way she didn't expect.

About halfway down the mountain, her cell phone buzzed like bees. She pulled her hand away and fumbled in her backpack for it.

"Hi Mom. No, we were near the top of Sierra Blanca. Haven't seen any signs. A 3.2? Okay, we'll be careful. We're halfway back to the van. See you tonight."

Alex, Tom, and Corbo stared at her from a few feet lower on the trail.

Heat rose in Amber's cheeks. She hurried down the path, and brushed past the others. The wagon rolled in front of Tom, whose turn it had been to try to keep it from running down the mountain without them. Amber jerked the handle out of his hands and let the momentum of the wagon speed her down the trail without noticing the closeness of branches and trees.

Alex caught up to her, and took hold of the wagon handle as they reached the three quarters down marker. "Hey Amber, slow down. Don't hurry so much. You use twice as much energy that way."

Amber let go of the handle and said, "Sorry, it's embarrassing that they call to check on me over every little thing."

Alex stopped and lifted her chin in his hand. "A few years ago, I felt the same way. Now, I wish my mom could have called me when that rumble happened. Is it the volcano? Is it an earthquake? It may be both. This isn't walking to the corner store on a sunny day, in a safe seaside town. This is business. The other team needed to know we were all safe and our job was done. They could have called any of us. It is about you, though not all about you."

Alex held her chin a moment. He let go, and stared off down the trail. His eyes teared. "Sorry. I miss my mom. And, helping her and dad, rather than trying to do it all myself. Not used to it, I guess. After a year, you'd think."

"Alex," Tom said. "I'm here too. You did a good job up there. We have a lot more work to do. Let's go back to the van."

Amber nodded. Alex's reaction was familiar. She had always been sure of her opinions before. Now, she was unsure if she knew enough when put to the test. Then, Karen had been beside her. Apparently, Alex missed his mom as much as she missed her dad.

Tom reached his hand to Alex's shoulder. He turned to Amber. "I know it's not easy to be in their shadow. They sent you with us though, because they trust you, and your opinion. If your mom didn't care, she wouldn't have called. She wanted to check and see where our team was, and let you know, she was safe. You didn't ask where they were when the quake struck. You'll give an honest scientific report. That's why they didn't call Alex. They don't know him personally." Tom half grinned. It didn't quite work.

Alex checked his phone. "They may have tried to call me. My signal isn't good here. Guess I need to see what we can do about that at camp tonight."

"Sorry," Amber said. "Let's go. I guess we are all trying to do what we think is best." This whole trip on the mountainside had been a bit too much for her. Strange emotions clouded her mind. Why hadn't she asked her mom where she was? Her mom could have been in more danger than she was.

The memory of Karen and her own dad had hurt. Brandon never could, and never tried, to replace her own dad. He was always there when she needed someone to talk to, almost as much as her mom.

The heat she felt when talking to Alex scared her. He was different than anyone she had ever known her own age. Not at all like Jerry. Alex could almost be trusted, maybe. He'd never be Karen, not able to laugh and share silly things, as well as scientific things. Not that they were silly much. He might not even like cats.

They walked on down the mountain, ignoring Corbo. Amber watched for signs of land deformation. Animals or people walking on the mountain trail could have made the few visible changes. Vegetation flattened and rocks on top of plants in places. Some freshly disturbed from the quake today.

Amber was at the back of the line as the trail entered the parking lot. They hadn't seen many animals coming back down either. A few birds twittered and squirrels chattered along the edges of the parking lot.

Corbo opened the back doors to put the wagon in.

A typical fast food style bag with the name "Little Italy Deli" in forest green squashed beside the other equipment Tom and Alex had brought.

Corbo slammed the door shut.

Amber jumped at the sound.

"Okay, anywhere else today?" The seat groaned under Corbo's weight. "Livia hasn't shown up, and we want to be gone before she does."

Alex put his hands to his forehead. "Tom and I have been up way too long to go anywhere else."

He yawned. "We need to do more. Without a nap, I don't think we can."

"Okay, back to camp then?"

"It's midday." Tom yawned and stretched. "We can take a short nap, and check the terrain for taking more equipment out tomorrow."

Alex nodded. "Sure. My head is starting to hurt. The pressure and temperature is drastically different here than Hawaii."

"And the plane noise for nearly seven hours didn't help," Tom said.

After the van was on the road, Amber said, "I noticed the 'Little Italy Deli' bag. Is there a good Italian restaurant near here?"

"Sure, the one Livia's parents own. She brings food from there sometimes. She won't let me meet them, though," Corbo said.

"Why not?"

Corbo laughed as he steered through traffic. "What do you think? The strong Mexican fieldworker with a beautiful Italian girlfriend. She knows they won't like me."

That wasn't a nice thing to say about himself.

"They barely tolerate her. Sending her off to find out what she wants. She doesn't know any more than I do what she wants from life. Isn't much to offer around here."

Amber disagreed. Plenty of farmland to explore, places to dig, and read the stories the earth tells of its past, as well as predictions for the future of this community. "What is Livia like? Will she be joining us?" Having a friend to talk with would be nice, though no one could replace Karen.

"Not sure she will want to. She is a jealous person, and spends a lot of time with her rally group."

Alex bumped into Amber as the van swerved for a curve. "What kind of group are they?"

Corbo slowed for a stop sign. "One that doesn't like scientists, military bases, or much else. They spend a lot of time preparing for their 'second coming,' and they think both scientists and the military are speeding us there."

"Wouldn't that make them happy?" Tom asked.

"You'd think so. Though, it doesn't. Guess they want to live as much as the rest of us."

Corbo steered hard around a curve. "The group didn't seem half-bad a while back. It's one thing to know that the military bases

aren't good for the environment. It's another to try to make them to leave. That won't happen."

Tom glanced back at Alex and said, "Can Livia help Dr. Rebecca with her work? It would keep her busy."

"No. She tried once. Livia was so resentful of the way Dr. Rebecca gets me to do whatever she wants. It made her too jealous to come around much. She doesn't understand. At work, you are ordered around. In personal life, it's different."

Alex held onto the seat. "Livia doesn't try to order you around too much, I hope."

"Sometimes. She claims it's just the way she is. I laugh, and say she is just as capable as I am, and less tired, as she doesn't have a job. Then she gets mad and tries to accuse me of liking Dr. Rebecca more. As if. She's almost as old as my mother!"

Amber tried not to laugh at that statement. Dr. Rebecca's work was her world. As her role model, Amber knew Dr. Rebecca wasn't perfect. People served the purpose they were there to complete, and nothing else. She rarely let anyone know her any better. In fact, she'd treat Brandon, Alex, and Tom as more workhorse than friends. Maybe better, because they would be helping put the data together. Even Amber was still a kid to her, until she proved what she knew and could do.

The tired group arrived back at camp and trooped to the sleeping quarters.

Amber walked into her room and put the pack down on the bed. She wanted a nap. There hadn't been much sleep the night before, the early morning wake up call, plane ride, and then the quake was more chaos than she normally faced in a month all scrambled into one day. However, Alex and Tom had been awake and going even more hours. If she rested for a few minutes, they could freshen up before their nap, and then she could take her time.

"Amber?" Alex peeked in the door. "Do you need in the bathroom?"

"Not now. Go ahead. How long do you want to rest?" Amber pulled out a travel alarm clock.

"Call your mom and have her wake us when she returns." He glanced at the room, enough space to walk between the bed and the wall. "This room's almost a closet."

Tom closed the bathroom door.

"It's okay." Amber said.

"Our room is bigger, for two of us. Wish they had left you a little more room." Alex leaned against the doorframe.

"Don't need it, do I? A table to put my clothes on would be nice. I'll be fine."

Alex closed the door as Tom passed him in the tiny hallway.

She stretched out for a moment.

Water trickled in the bathroom across the hall.

Karen would miss so much here. Two young scientists to learn from, and if she liked one of them better than Jerry, perhaps, they could work and travel together in the future. Better than leaving her best friend behind. A call, or an email, might still bring her to New Mexico.

Her phone rang, interrupting her dream of Karen, Tom, and Alex following her through a wooded valley with smoke rising from a distant mountain peak. She grumbled as she reached for the phone.

"Hi Mom. Yes. We were napping. I was supposed to call you. Sorry. I'll wake Alex and Tom. Be there in a few minutes."

Voices vibrated in the background. Groggy, she couldn't determine who was speaking, or what they were saying. She ignored it. In the hallway she stumbled, and knocked on Alex and Tom's door.

"Um," half groaned an unrecognizable voice.

"Alex, Tom, wake up. Dr. Rebecca wants us in the other trailer now."

"K, minute." Mattress springs clattered covering up the vibrating voices in the background.

Amber waited.

Alex opened the door.

Tom rubbed his neck as he sat up, yawned, and stretched.

"What's that screeching?" Alex asked.

"I thought maybe you had music playing." Amber grabbed her phone and bag before she closed her door.

"No. Not us."

Amber glanced out the window. Beyond the two trailers, a group of people carried picket signs. They circled the parking lot, screamed, and shouted.

"What do the signs say?" Tom said, half asleep.

Alex opened the door between the trailers an inch.

"Go away!"

"Stop the shaking!"

"End the research!"

"Don't invite trouble!"

The protestors screamed and marched in their direction.

Alex steered Amber toward the other trailer. "Come on Tom, now."

Once they were inside, he locked the door behind them, and looked out the window.

"They want us to leave. They think our visit caused the tremor today," Dr. Rebecca said.

"It's more complex than that," Corbo said. "They think the military are to blame as well. They may be partly to blame. I think we should use one of their bombs to stop the quakes, like in the movies. Dr. Rebecca doesn't think so."

Amber's mouth gaped. Her thoughts flew too fast to find words to express them.

"No, Amber, I would never advise that," Dr. Rebecca said. "We have no idea if they would stop the quakes, make them worse, or cause the sleeping volcanoes to wake up as well. It's too dangerous."

"And I think we should try something to relieve the stress," Corbo said.

"Or create more stress, of a new and more dangerous type," Dr. Rebecca said.

"It's no worse than what the military is already doing, testing bombs out there on the range. We don't know what the effects of those are either. Have they tested any new ones lately?" Corbo stood up as he spoke.

Dr. Rebecca sighed. "I don't know. And if they are testing them, they could be hitting undocumented faults, causing some of the issues we have experienced lately. You know we aren't allowed any information that might be confidential."

"And you're not even allowed to study many of the faults that lie in this great plain. You don't even know how many faults there are on White Sands. Or, if there are any new rifts on the bases. Military testing could be causing the seismic activity and they would never tell you. How many times have they refused to answer your polite emails asking for clarification?"

"Corbo. That's enough. There is nothing we can do to change what they do, or don't do. I wish there was."

"Lives could be in danger because of what we don't know. You've taught me that much."

Dr. Rebecca sighed. "The military requested these experts to come here for that reason. We will find answers."

Dr. Rebecca picked up her coffee cup. "Now, please, go call your girlfriend, and tell her, and her rally group, to leave this property before I call the rangers. They don't understand what they are picketing. As soon as we have information, we will hold a press conference."

He nodded. "I'll try. She doesn't listen to me any more than you do. If I didn't need her." He glared at Dr. Rebecca and stormed out the door.

Dr. Rebecca glanced around at the astonished faces. "Sorry. We disagree on what to do here. The government officials want answers as much as we do, without alarming the public unnecessarily. Of the three supervolcanoes on our continent, one is here at Valle's Caldera, north is Yellowstone, and out west, a third, Long Valley, in California. All show changes in their underground lava fields, as well as increased tremors, both in intensity and duration. A decision on what, and when, to tell the public has to be made soon."

Dr. Rebecca placed her coffee cup beside her computer. "Amber, thanks for pointing out the accumulated, across country dangers to your mom. She alerted me. I reviewed your notes, and many more. Without your help, you wouldn't be here."

Amber listened. She pulled up the map and reviewed the geographical features between the Rio Grande and Yellowstone.

Dr. Rebecca spoke in the background. "One more tremor like today, or one of greater magnitude, and we have to do something. We need all of your knowledge, skills, expertise, and all the facts you can gather as fast as you can. Let's all work together. Claire you may share today's adventures."

"We were able to see quite a bit today. I'm verifying the data to determine where the quake we felt originated. There were several small ones locally, mostly on and around White Sands," Amber's mom said.

"Meaning we will never know how much deformation there was?" Amber asked.

"Perhaps. I think General Nord will share with us; he has to if he wants answers. How much did you all manage today?"

Alex shared the day's story, at least the scientific part. He left out the emotional reactions on the trail.

They hadn't done enough. Amber knew that. Equipment should have been set up in at least one more place. If they hadn't all been so tired from lack of sleep, tempers wouldn't have flared, and they could have made it to the Carrizozo Malpais. She hadn't made a good impression on Dr. Rebecca being asleep when the adult team returned, that was obvious.

Corbo stomped back in, sat down, and glared at the floor.

Dr. Rebecca walked to the New Mexico map on the wall. "I have some old maps, recently digitized, of the survey information done before these lands became top secret. Until we have an updated one, this is all we have to go on."

"Dr. Rebecca?" Amber switched the screen to local geologic maps and pulled up the Inland Seaway maps beside them.

"Yes, Amber?"

"I hope we can see the faults. We need to, if we are going to determine what the government should tell the people. Is there someone who can tell us what's changed on these maps?"

"I hope so. We need to review and understand the old maps tonight. Tomorrow, you three place the next batch of seismometers. We may not have much time. The quakes are coming faster and stronger."

Alex pointed to the lava flows around Socorro. "What about here? There are so many quakes clustered in Socorro."

"The lava depth is changing there too. It appears the hot spot that was once under the Magdalena Mountains may have shifted to the east. The land is rising in a few spots, and lowering in others." Tom searched for data from the last few years.

"It may be forming a new caldera." Alex pointed to a data set from two days ago.

Tom compared the data from the last few years with the last few weeks. "Perhaps more than one. The rising land is often a mile or so in diameter. There are four known increasing spots, that have risen about a foot since accurate measurements have been made

over the last few decades. Valleys, scarcely visible, have formed between them."

Alex whistled. "Not enough for the public to notice, only the equipment."

"It could be nothing, or something. The magma is closer to the surface in those four regions though." The map shifted as he plotted what would happen if the current changes continued unabated for a few more weeks.

"Anywhere else to worry about?"

The mountains on the map rose, and topography changed as Tom's program worked.

"Here of course. The sensors fluctuate after each quake." Tom zoomed out to show the White Sands and Sand Andres fault line.

"I see data coming in from the equipment we set up today," Alex said.

Corbo walked over and looked at the screen. "How does it help?"

"The more locations we have measuring equipment located, the easier, and more accurately we can determine epicenters," Amber's mom said.

Corbo nodded and turned to Alex, "The other machine you set up?"

"The one that measures atmospheric gases? It only works for a small area. If a fumarole developed half a mile, perhaps even a quarter mile away, it might not detect it."

"The seismometers work for miles, I guess," Corbo said.

"Depends on the size of the quake, and the terrain it has to pass through. Most will detect miles away. Some quakes have been large enough to be detected across the globe. The more equipment we have running, the more accurate our measurements," Dr. Rebecca said.

"What about the Datil-Mogollon Volcanic Field and the Aden lava flows?" Amber asked.

Dr. Rebecca handed Amber an empty coffee cup, and said, "We don't know. I have student teams going there tomorrow to set up any extra equipment we can spare. We will do all of the monitoring from here. They have to return to campus for exams. I figure the day after tomorrow we will begin monitoring all of these sites. Scientists around the world are setting up all the spare equipment they have, no matter the age or condition."

Chapter 8

The Valley of Fires State Park, New Mexico

Amber learned the nuances of the volcanologist's equipment and GPS units. Alex and Tom showed her how each piece worked, and how important they were for studying volcanoes, as well as earthquakes. Though she knew the basics, it had always been someone else's job to set up the equipment, while she scouted the area looking for telltale fault scars.

The rough ground made travel slow. A month ago, the trip would have taken a week of camping, sightseeing, and stories along the way. No time now. They had to hurry, and not slow down for the scenery. Rocks tripped them. Sand slipped into their shoes. Scorpions peeked out at them from the shadows of boulders. The sun scorched their skin, with not a cloud in sight.

Her skin burned from the intense rays, as it never did in the vegetated hills of California. Rest stops ended with yawns in the extreme heat and sunshine. Emptied backpacks felt heavier on the walk back to the van. Arms and water bottles emptied, they stumbled back into camp.

Amber's mom and Brandon talked over their finds. Their bits of conversation she instantly recognized, unlike some of the bits Tom and Alex had discussed today. While there were similarities, there were also striking differences between the study of earthquakes and volcanoes. Fresh flowing magma and lava had different properties than the ancient rocks she usually studied. Her knowledge didn't include plumes and bulges, and their interactions with the surrounding countryside.

Amber's computer screen filled with open windows as she sorted data. Her phone buzzed.

"Hello. Hi Karen. How are you? Taffy had four kittens. That's great! Everything's good there? Call your dad. He wants to talk to you." Amber listened to a quick story about Jerry, and said goodbye so Karen could call Brandon.

Tom's screen blinked, catching her attention.

He opened an email.

"Anything interesting?"

"Sure. Wait till Alex's back."

Alex returned with drinks and snacks, sharing with Tom and Amber.

"Alex, remember that project we started?" Tom said.

"Barely. Seems like months ago."

"Your friend Shelly completed the project, and shared the results with my mom, who forwarded them on to your dad."

"Good. If they had been spectacular, he would have called. He probably knew them already, anyway." Alex toed Amber's bag out of the walkway and sat down.

"Oh, they were unique. The lava is changing density and composition in unexpected ways."

Alex rolled his chair over to Tom's screen. "In what ways?"

"The hot spot could be moving faster than expected. Your dad is too busy trying to verify the results were computed correctly. After all, we used the wrong equipment." Tom grinned.

Alex stared at the screen so hard he almost fell into it." And, he is sending his students back out to duplicate the experiment, as well as a team to Loihi. He isn't going himself."

Tom reached out to Alex, "It's okay. He's probably trying to verify all his data sets are right."

"He has so much trouble walking. That last collection trip was terrible on him. He hobbled back to the van."

"Don't worry. Mom will take care of him."

Dr. Rebecca walked over. "Alex, do you have access to your dad's information? We need to verify the lava density changes here as well. If they are comparable they may help us."

"Sure. I'll email him. Are there any open calderas here? We brought a few COSPECs to measure the volcanic gases."

Dr. Rebecca shook her head and placed her hand on his shoulder. "Not here. We can test the density in a few places. Once we see lava here, it's too late. People wouldn't survive the explosion to let us know its composition, at least at some of the volcanoes."

"A mine might work," Amber said.

"Or drill a well. It might relieve some of the tension and stress." Corbo plunked his plate on the counter and walked over.

Alex enlarged the picture. "It could fracture the rock, placing the lives of the drillers, and anyone near, at risk."

"We don't have time or money to drill a new hole, and it can take years to select the best spot. The ground is changing too fast. There are mines in some of the mountains around," Dr. Rebecca said. "Perhaps they can help. They should have some equipment monitoring already, even if it is less extensive than what you have."

Tom changed the screen to search for the local mines. "They can let us know if their mining operations have noticed any changes. Extra heat, unexpected rock deformation, drilling difficulties, deadly gasses. It might be a good idea to take one of the smaller COSPECS to one of the mines closer to the activity."

"I'm going to call first thing in the morning to organize a meeting. We will meet the government and mining officials at Kirtland Air Force Base. It's almost out of the active area, though close enough so those who need to know our results can easily gather there."

Dr. Rebecca turned to go back to her seat.

The work trailer rocked on its wheels.

She staggered and grabbed a chair that slid across the room, pulling her with it.

Computer screens bounced with results coming in from the field.

Monitors flickered.

Amber grabbed hers from habit.

"I think that was a 5.5," Amber's mom said as she steadied herself in the chair.

"Likely," Brandon said. "It must have been close to here."

"Not necessarily," Dr. Rebecca said. "The waves tend to flow further and easier inside the valley basins than they do in California."

"At least the computers are bolted down." Amber steadied her notes on the desk.

"Check outside," Amber's mom said. "The other trailer might have suffered damage."

Amber carried her notes to the window. The trailer's thin skin would crumple if one of the larger trees fell. A geologically active location really needed reinforced walls. Branches had fallen on the ground she didn't think had been there before. Otherwise, no obvious damage.

She maneuvered through backpacks and papers to her computer. Data flashed on the screen. Lost in the numbers and words, a classical music tone interrupted her work.

Dr. Rebecca answered her phone. "Hello? Dr. Evan. What? That's incredible. Okay, watch it and let me know if anything changes."

Dr. Rebecca closed her phone and turned to Amber's mom. "Claire, the magnetic field shifted at the same time as that last quake. Compasses are now reading a place about 20 miles further south in Russia as magnetic north."

"Will it last?"

"No idea. You've studied magnetic shifts in earthquake zones?"

"Some. I know someone in Washington State who has more knowledge than I do."

"Call them. Access their information, and work on the data. I'll give you Dr. Evan's email too. Brandon, check for epicenters and changes across the globe."

Dr. Rebecca turned to Amber, "Anything?"

"The equipment isn't giving us any helpful readings. The numbers are scrolling, and tremors are ongoing. There could be multiple epicenters, or one event triggered another."

Tom slid back in his seat and almost hit Brandon. "Wow! Look at this!"

Amber glanced over at his screen. The picture showed a lava field under the Magdalena Peak.

"It's going deeper, and narrowing. Bad news."

The group crowded around his screen.

Alex pointed at the magma chamber. "The land deformation has spiked ten feet in the air." He turned to the others, face pale. "She might erupt."

Dr. Rebecca closed her eyes and leaned back. "How soon do you think?"

"Hard to say, another quake like that, and anytime." Alex paused while reviewing the screen. "The inland craton plates are slipping, adjusting the hot spots. Not good. I'm going to check more data." The picture on the screen continued shifting, as the land resettled.

Dr. Rebecca turned to Amber, "Anything?"

Amber turned back to her screen. "Too much. Alex is right." She pointed to the screen. "Here, the Rio Grande Rift has shifted the eastern plate about two inches further east. Won't that mess with GPS readings?" If the craton plates moved enough to open new hot spots, or reopen old ones, anything could happen.

Dr. Rebecca stared at the screen. "Some. They'll adjust in about 24 hours, not enough to matter to most people. Miners and pilots will be affected. They are used to some fluctuation."

Amber's screen panned and showed the whole region that had changed. "Texas and New Mexico are splitting along the Rio Grande. They may split further apart and open the seaway again."

Dr. Rebecca turned towards her own computer. "Not in a lifetime. That kind of change is expected to take millions, or at least thousands of years. Right now, the water flows south. It would have to reverse flow to turn these once ocean basins back into ocean again. Plus, as dry as it's been for millennia, the ground won't hold the water. Water tables will have to fill up first."

"We only think it takes millennia," Brandon said. "For all we know, a few sudden events could cause it. The quakes for the last several hundred years may have been leading to this pivotal event."

A hard winter and lots of snow up north followed by a hot summer could fill the water tables faster than anyone thought. Especially, if water infrastructure broke and people lost access to using it. Amber didn't want her world to change. Her dreams for a future scurrying through ancient faults, and discovering new ways to predict future ones slipped and slid like the faults on the screen in front of her.

Brandon looked at the screen again. "Once, scientists thought Washington State's Channeled Scablands damage took as long to create as the Grand Canyon. The damage caused by an ice dam of the Cordilleran ice sheet breaking at the end of the last ice age caused Glacial Lake Missoula to create the scablands in a matter of days."

Memories of the documentaries Amber had watched flowed before her eyes, dimming her current surroundings. The ice dam had ruptured and refroze many times, with sudden massive flooding, killing all living things in its path. Entire forests washed away. Scars remained visible, odd canyons where canyons shouldn't be, places where little to nothing grew, even today. Other areas recovered, and re-forested, with deep ravines that appeared to have once held surging rivers. Rivers that gushed for hours, maybe days, dropped boulders as they diminished on their seaward journey. The ancient floods gave Washington State many of its prominent features. Much like how the Colorado River dug out the

Grand Canyon in six million or more years, depending on which theory you read.

Something serious was happening in New Mexico, and around the world. It could rip the nation apart. If the Rio Grande widened, towns would be inundated. A volcano explosion, especially in the Valles Caldera, or Yellowstone would devastate the region, and potentially destroy the military bases. And if more than one supervolcano erupted, a volcanic winter would devastate crops, animals, and human lives.

Amber gulped. She pulled up a map online and reviewed the link between the Rio Grande, Valles Caldera, and Yellowstone. An eruption at either could send streams of lava down the river of water. Though it might be fascinating to see, the devastation would be disastrous.

"Alex," she whispered. "Please tell me Yellowstone won't blow."

Alex studied the line she had drawn. He pointed to the northeast of the last active Yellowstone caldera. "The hot spot should be here. There are whole teams, and websites devoted to equipment monitoring it."

"And none on Valles?"

Alex shook his head. "It's been declared extinct. Monitoring tends to focus on visitors, trails, and wildlife."

Which means it isn't a priority. Amber closed her eyes. She would prove to Dr. Rebecca, and her mom, that she could research and run the reports without Karen to check her work.

Alex's hand shook. "No need to worry everyone now. Wait until tomorrow."

Amber understood why the government didn't want anyone to know. What could they say? And where could people go to safety?

Chapter 9

The Valley of Fires State Park, New Mexico and Kirtland AFB, New Mexico

Alex grabbed the last pages as they spit out of the printer. They contained even more data to examine as the group rode to the meeting at Kirtland AFB. The graphs and charts were too colorful to contain good news. After climbing in the vehicle, he handed some of them to Amber.

Alex's pages were covered in volcanic updates, that changed by the hour. Some bulges seemed to be fluctuating. A rise of a few feet, then a relaxing, almost like a person trying to prevent themselves from throwing up. The end result could be a violent eruption during a bulge's subsiding period, taking everyone by surprise.

It had happened before, at Santorini, Vesuvius, and perhaps many more. He should have checked the data for the remains of the Santorini hot spot as well. There'd be time tonight. Alex marked the top of one page Check Santorini's current and historical growth and explosion patterns! Meanwhile, Tom could verify Vesuvius, and the active almost supervolcanoes in South America.

Alex peeked over at the pages in Amber's hands. "What do you see?"

The charts and maps blurred as she flipped through the pages. "Too much information. We don't have anything to compare these events to. What we have is a large area," her finger drew a circle on the map, "that has frequently had slight earthquakes too small for most people to sense. It has a ring of dormant volcanoes that most people think are only mountains. Now, the magma underneath, the water tables, and the magnetic field are shifting."

Alex pointed at the pages. "And that ring is only one group of volcanoes. New Mexico is littered with the remains of volcanoes, whether as lava beds, cinder cones, and even hot springs. This area is as volcanic in origin as Yellowstone or Hawaii."

Amber flipped through the pages. Hawaii showed an increase in quakes, too. Less than one tenth of a percent, and even their

intensity was barely increased. So far, Yellowstone showed no unexpected changes. She closed her eyes. "There is no record of so many events occurring at once in recent recorded history. Or so scattered."

"What about unrecorded history?" Alex asked.

She closed the research folder. "We don't know. If there is, we haven't found, evaluated, researched, and documented it. Few regions have been studied intently. These events could be right under our feet, especially in war torn countries. No one knows, or has had the opportunity to study every inch of ground." Amber piled the pages together and handed them back to him.

Amber's mom peered back at them. "Many places were surveyed with equipment that is outdated now. More sensitive equipment might have given us a better picture. And yet, without the early equipment, we wouldn't have any pictures."

Dr. Rebecca nodded. "It's uncharted territory. Add the nuclear concerns, and there could be real danger for everyone."

"Are there nuclear weapons stored underground?"

Dr. Rebecca turned in her seat. "That is part of what we have to find out today."

"I hope they tell us," Amber said.

"We may know, by how they act. We have to be sure they understand the seriousness of what could happen. Imagine if the ground shifts six inches one way, or the other, shearing off a nuclear bomb in the rifts."

"Are they tightly packed in individual holes?" Alex asked.

"Perhaps not. The effects might be safer if only one explodes, and none of the blast can escape above ground. However, if many are stored in a large pit and several fall and explode." Dr. Rebecca's voice trailed off.

Alex shivered at the thought. A few nuclear bombs together could blow a crater larger than any active volcano. If the bombs were stored in scattered bunkers across the hundreds of miles of military complexes in this part of the state, craters would litter the surface for miles.

"The bombs could set off a massive chain reaction. The whole state would be in danger. If one storage pit blows, setting off the one next to it, nothing could stop it. Half the state could end up pocked like the moon."

"Or worse," Amber's mom said. "They could be strong enough to rupture the Rio Grande fault more, pushing New Mexico further one way, or the other."

"That would change the climate too, and who knows what dramatic climate change would do to modern civilization," Tom said.

"All the dust from the explosions and volcanoes would give us an awfully cold winter," Amber said.

"Not to mention the loss of livestock and crops. Can you imagine going back to candles and fireplaces? Most people don't have the patience, or the skills to use them to heat, cook, or read by. If they even have one." Dr. Rebecca said.

"This is all happening too fast. I don't want to be cut off from dad." Alex clenched his fists. Being on his own had seemed great back in Hawaii. A chance to make his father proud. Everything had to work out okay.

Amber squeezed her phone. "If the Rio Grande shifts, more North American cratons may form, or old ones split. We don't even know how many there are. New mountain ranges will develop in places they aren't already, or even increase the eastern march of the Rocky Mountains."

She pulled out a map. "It may even fold some of the land further east as it stresses. The great lakes would take some of the compression, while." Her voice trailed off as she stared at the map.

"It could crumple Niagara Falls like a cookie." Alex said. "And close off the main artery from the Great Lakes to the Atlantic Ocean. The lakes would then flood low lying cities and towns."

"All conjecture at this point," Dr. Rebecca said. "The science is ever evolving, changing as fast as the earth does. Let's try not to worry about what may, or may not be happening, and enjoy the drive."

Corbo jerked the steering wheel. "Geology will have to wait. Right now, we have immediate problems."

Several vehicles jammed with people boxed in their van. Those people opened their windows and shouted. They waved at Corbo, red faced.

With the van windows shut and so many shouting simultaneously, it was difficult to understand what the people shouted.

"Sorry," Corbo said. "I had to tell Livia where we were going today. I didn't think she would tell anyone." Corbo swerved to avoid hitting the vehicle on their right.

Dr. Rebecca grabbed her phone. "I'll call the police and have them secure our laboratory and campsite. As well as rescue us from these ralliers."

Alex sighed. They had so much equipment in the labs. A few books he would need later had been left at camp, to protect them from being lost. If the ralliers decided to burn down their trailers, he might lose some of his valued resources signed by his dad and mom. Mom's picture was there too, under the mattress.

Sirens blared in the distance. Flashing lights appeared behind them.

"Corbo, slow down," Dr. Rebecca said.

"No. I can't see the windshield of the car behind me. It'll hit us."

"Let off the gas."

Blaring police cars gained on them.

The vehicles beside them became more aggressive and swerved inward at the same time. They were playing chicken. For the moment anyway.

Corbo slowed.

Sirens blared in the background. Horns, screams, and shouts enveloped the van.

The police cars screeched up behind the vehicles.

Corbo hit the brakes as the vehicles on either side swerved inward towards the van.

Alex held onto the seat, so he wouldn't slide off into the floor.

The car behind hit them, while the two who were beside them crashed almost front end first into each other.

Corbo took his hands off the wheel. Out of breath, and sweating, he stepped out of the van.

The first policemen checked the car behind them. The second police car drove around and parked in front of the head on collision.

The shouts and moans of the ralliers echoed around them. The ones who were in the collision wouldn't be going anywhere soon. Of course, neither would they, being in the middle.

Dr. Rebecca stepped out of the van to talk to the police officers. After a few minutes, she turned back to the van.

The lead vehicle had kept going and not slowed down. It was long out of sight.

"Come on," Dr. Rebecca said. "If everyone is okay, we are going to walk around the other cars. Dr. Evan is coming for us."

"Don't we have to wait for paperwork to be filled out?" Amber's mom asked.

"No. Not this time. I gave them my business card and explained that we are late for a meeting at the base. They can take care of it from here. The insurance agent will send a wrecker for the van."

Alex helped Amber out. Her mom and Brandon stepped out, shaken, and soon steadied. He picked up papers and laptop bags from the floor and under the seats.

The team gathered around the door to carry the items they needed for the meeting.

"I hope my screen didn't bust." Amber opened her case to check the computer.

"Should be okay," Brandon said.

Corbo stayed beside them. As they walked to the front, he remained hidden from the view of the police officers. He sat behind them, out of sight.

Traffic was light, so there weren't many cars stuck behind the wreck. About twenty minutes later, a brown and green military vehicle raced southbound towards them. It almost passed them, then crossed the median and stopped right beside them.

The window rolled down and a man said, "Dr. Rebecca, your ride."

She grabbed the doorframe of the transport jeep. "Thanks, Dr. Evan. Glad I called you as soon as I did."

Corbo ducked into the truck.

Dr. Rebecca stepped in followed by the rest of the team.

Alex took an empty seat in the back next to Corbo. The officers had not questioned Corbo, even though he had been the one driving the van. His evasion was unexpected after his boasts of the days before.

The truck rattled to a start.

Ambulance sirens grew louder as Dr. Evan drove off.

Corbo sat with his face in his hands.

"Why are you hiding from the police?" Alex said.

He looked up sharply, and took in a deep breath.

"It's okay," Dr. Rebecca said. "Tell them. They need to know, if you're going to work with them."

He glanced at the group and mumbled.

"Corbo, what?" Alex leaned closer.

Corbo jerked away.

Alex sat back and glanced across at Dr. Rebecca.

"Corbo, I won't speak for you. I didn't see Livia in any of those three cars. She is either ahead, or behind us. I hope ahead of us. The Air Force can try to contain her."

Corbo almost grinned. "It's for my safety. My parents were illegal immigrants. I was born here, and lived here all my life. No paperwork. They didn't care about that as migrant workers. It didn't matter when they came, or they didn't know. They never said, and won't answer my questions. I don't exist. If a cop asks for my ID, they'll arrest and deport me, no questions asked."

"You didn't have to have a birth certificate to go to school?" Alex asked as the seat bounced out from under him.

Dr. Evan steered the vehicle off the ramp and through the crowded streets of town.

"Migrant workers move so much, schools forget to ask. And, they can't deny an education if you don't have one. By middle school, they forget about them."

"You have to have a driver's license." Alex gripped the seat as Dr. Evan stopped at a light.

"Nope. Can't have one without proving who I am." Corbo said.

"What are you doing about identification?" Amber's mom asked.

"I have to legally prove I am here. That's why I have to marry Livia. The United States officials don't believe I was born here. No other country knows I exist."

Amber's map crinkled in her hand. "A man without a legal home, anywhere. Sad. School records should account for something."

"No. Even schools tie them to social security numbers. And without one, well, there are hundreds of people in this state with my name. Those records could belong to any one of them. As for working, no proof of who I am means I have to be careful about my jobs as well. A green card to stay would be the start. Dr. Rebecca is trying to help me. Some provisions let her hire me, without documentation."

"How will marriage help?" Alex asked.

Dr. Evan lurched forward, narrowing missing a bike rider who whizzed in front of him against the light.

Dr. Rebecca answered for him, "Marriage will give him a reason legally to be here. He will have to begin the complicated process of legal immigration, once he is married. Livia is the only woman he has ever asked. Corbo isn't a bad person. An undocumented past scares most women off. Also, no well-paying job, no family, and no place to call home doesn't help in the search for a spouse."

"We're almost there," Dr. Evan said.

The gates of the Air Force base imposed order out of the chaos of streets, traffic, and people.

Alex could not imagine living an entire life in a country that did not accept that you belonged there. How empty, lonely, and defeating that must be. Corbo would have to face his fears as the gates loomed ahead.

Corbo hid his face in his leathery hands, elbows resting on his knees.

"You weren't coming all the way, were you?" Alex asked.

He shook his head. "I was supposed to stay with the van at the rest stop. A few miles down the road."

"What will happen when they check our IDs?"

Corbo shook his head. "I don't have a green card. I shouldn't need one," he whispered.

Dr. Rebecca put her finger to her mouth to silence him as they pulled up to the guard shack at the base entrance.

"How many?" The soldier squared his gun across his chest.

"Eight," said Dr. Evan.

"Report says seven, let me verify."

They waited a few moments in silence.

"Please, leave your extra person here. They will be treated well. Not allowed to leave until you return."

Corbo gulped. He stood shakily and tripped out the door. He entered the shack with tiny windows. The door clanged shut behind him.

Alex couldn't see him anymore. He hoped he was safe, for Dr. Rebecca's sake, if no one else's.

Chapter 10

Kirtland AFB, New Mexico

Alex lagged behind as Dr. Evan ushered the group into the building.

The guard shack was almost out of sight down the road crowded by various unmarked buildings. Corbo would have to wait on them. If the meeting took too long, he might worry and fidget.

One exchange student Alex's parents hosted a few years before had lost his student visa. The emotional flurry, frantic search, and fear of the temporary family member, had never been forgotten. The house had been turned upside down. Mom and dad called multiple agencies to determine what the student would have to do to replace the identification card. The student had lost sleep, two days of classes, and a final exam, only to find the visa had been accidentally stapled to a term paper already handed in.

It could happen to Alex someday, while traveling and exploring volcanoes. He had to help Corbo. Maybe his dad would know something, when he returned to Hawaii.

All the unmarked buildings confused Alex. Soldiers stepped confidentially in and out of the each, so they must be able to remember which building served what purpose. Even the university labeled buildings. Maybe labels were a crutch he was too used to.

Amber held the door for him.

Alex caught up and stepped inside the chilled building.

"Down that hall. How many eyes are watching us?" Amber smiled at him.

"Too many, that's for sure. Let's go!"

Amber's mom and a few other scientists sat near the projector. Her mom didn't notice them walk into the room late.

Dr. Rebecca answered the student's questions while shuffling printouts. Three stacks of papers partially hid the laptop.

"Here, place one of these at each seat." Dr. Rebecca handed a box of stapled pages to one woman.

Half the chairs were empty.

"Thanks for preparing these. They'll help." Dr. Rebecca turned back to the laptop and turned on the overhead projector. Pictures flickered on the wall.

Another person jumped up, took half of them, and the students chatted as they passed out the pages.

The overhead projector screen paused on a giant state map on the wall with roads, cities, and mountains clearly marked.

Alex and Amber walked up to her mom.

"These are some of Dr. Rebecca's students and scientists from the university. They will be helping us present our findings." Amber's mom waved at the five people surrounding Dr. Rebecca. One woman looked up and smiled.

"That's good. Perhaps they know local lingo better than we do," Alex said.

"Or some of the base members," Amber said.

Alex and Amber sat down together a few chairs away.

Amber's mom smiled at them as Brandon handed her a cup of coffee.

Alex tried to guess the distance between places on the map by the amount of time it had taken to travel from their trailer to the base.

The door opened and four men in military uniform stepped into the room. Two more stood at the door and watched each other, as if they were statues. The four men walked to the front of the room, and stood with arms crossed, next to the screen.

"Hello Dr. Rebecca. I am Brigadier General Nord here at Kirtland AFB."

General Nord waved to the men following him, and introduced each of them.

Alex sighed. He'd never remember which name went to which person. Colonels West, Sands, and Springs, all looked the same. Bald, similar uniform, and identical blank expression. The names wouldn't matter as much as what they had to say.

General Nord waved his hand. "These other colonels, from nearby bases will be listening to your presentation. I hope what you have to share today is important. If not, you have wasted valuable time away from other projects." He ushered the other officers to seats, and stood, watching the screen.

Dr. Rebecca introduced everyone to the Colonels; including the other scientists and students from her university.

She pointed to the screen. "Here, we will first highlight all of the known dormant volcanoes in the region. There may be more hidden in the White Sands range, in places civilian scientists do not have access to. Do you have any military geologists who are able to provide us with this vital information?"

"You will have to show us why it's necessary. Even so, no guarantees can be made that we can disclose that information." Colonel Sands stood straight and stiff. He expected the meeting to be short.

Dr. Rebecca nodded. "Okay, here is what we have. Underneath three formerly dormant volcanoes, the magma chambers have shifted dramatically since the last quake. In fact, I prefer to call it an event, since we are debating whether the ground shaking is in effect volcanic in origin, or an actual earthquake." She paused and waited for the information to sink in.

Dr. Rebecca pointed back at the map and the Rio Grande Rift Valley appeared on top of the visible features. "Here we have a unique situation. The eastern part of the rift valley has drifted further east in the last few events. The plates have shifted more at the southern end. With up to three inches of eastward movement in some locations. The northern end has split about an inch, as far as our measurements have been able to verify at the moment."

"Doesn't sound like much. What have been the official event magnitudes so far?" General Nord asked.

Dr. Rebecca pointed to each of the epicenters. "Up to now, they have been growing in number, frequency, and intensity at 4.5 three days ago, 3.2 two days ago, and 5.5 yesterday. Following the current trend, the next event is likely to be a 4.3 followed by a 6.0 or greater magnitude quake. That is enough to do damage and disturb a large portion of the population in the surrounding area as plates ripple further, and faster here than in mountainous regions."

General Nord rocked on his feet. "So far, these would all be considered minor events with minimal damage, little more than commonly occurs in this area. Other than the one yesterday. The 5.5 seemed more serious than I would expect locally."

"Yes," Dr. Rebecca said. "We are using the Mercalli intensity scale numbers, which slopes upward at a more gradual rate. A 6.0

on the Mercalli scale would do serious damage to a great many homes in the local region. Many walls would fall, and roads would buckle as the ground twists. Fortunately, this is a farming area. However, some schools, and the military bases could be in serious danger; since the major faults run right through them."

Dr. Rebecca nodded to Dr. Evan. She clicked a button and a picture of the Earth and its magnetic poles appeared.

Dr. Evan walked over to the map and said, "Here is where I step in for a moment. The last event caused the magnetic poles to shift, throwing off compasses worldwide. The magnetic pole shifts in a small circle every day. Pilots and miners are used to adjusting to small changes. This wasn't a small change."

Worried faces stared back at him. People shifted in their chairs. No one spoke, so he continued. "We have no idea if the poles will maintain these new positions, move further away, or revert back to their previous positions."

"How does that affect us now?" General Nord asked.

"There is concern about further magnetic pole, and magnetic field, shifts. We need to be aware of the possibility. Shifts can affect climate, GPS, and have other unintended consequences to travel and communication."

One of Dr. Rebecca's students raised her hand.

Dr. Evan nodded to her.

"Will they do a total pole reversal? That would affect infrastructure, satellites, and compass readings."

Dr. Evan sighed. "We don't have any known recordings of this type of situation. None in the known written history of the world. Studies on pole reversals in rocks are not able to pinpoint why, or how they occur. As devastating to our lifestyles as it would be, such a reversal would be a breakthrough in understanding, if it occurred in our lifetime."

General Nord shuffled his feet and looked at the other Colonels. "It would affect satellites then."

"Satellites can shift changes quickly, if they are in the right place at the right time. A pole shift will cause delays of at least seconds, probably minutes as satellites realign world coordinates. More than that, we cannot guess. Magnetic compass readings will be off. Flight patterns, drilling, and communications, including telephone, internet, television, and radio will be interrupted. If the plates

continue shifting, GPS units will be less reliable as runways, rivers, and roads shift and buckle due to the strain from quakes." He glanced back to Dr. Rebecca.

Dr. Rebecca picked up where he left off. "This goes beyond the volcanoes and Rio Grande Rift." She clicked a button, and all of the known New Mexico earthquake fault lines appeared on the map with the volcanoes dated to when they last erupted.

Even to Alex, the picture spoke more than words. For millennia, major volcanoes had danced across the state from the southwestern corner to the northeastern corner, drifting across the center in the southern half of the state. Faults ran primarily north to south along the mountain ranges. The Rio Grande River, bowed like a half moon torn in two, down the center of the state.

Dr. Rebecca zoomed in to view the White Sands Missile Range. The Jornada del Muerto volcano rose to the west. The Range was centered between the Jornada and Alamogordo faults, with the San Andres splitting it in half. The Alamogordo ruptured the Sacramento Mountains less than 15,000 years ago, a blink geologically. The San Andres fault had formed over 130,000 years ago. The Jornada fault, and its relatives out west, split even further back in time.

The Jornada del Muerto volcano, between the Rio Grande and White Sands erupted a mere 760,000 years. If the hot spot had shifted at the same speed and direction as the other hot spots, it could be nigh the boundary line of White Sands. Another few million years, and it would be under the Trinity site. If, the current events did not speed up the process, and change the geology through buckling the plates.

Alex squeezed Amber's hand. The Jornada del Muerto wasn't the only volcano on track to re-emerge under a military base. Los Alamos might have a little more time to move. The Valles supervolcano hot spot was on a collision course with it. Maybe Livia's protesters weren't so far off base. If Valles, even where it is now, erupted; Los Alamos, and White Sands would be buried in ash, depending on wind direction.

Dr. Rebecca slid the map out a moment to show the whole country. Yellowstone nestled near the top of the screen. Feeder rivers just below it led to the Rio Grande, which flowed east of the Valles Caldera, and southward to form the west bank of the Jornada del Muerto lava flows.

Alex gulped. Earthquakes were not his specialty. A general knowledge wasn't enough to understand the scale of the dangers they all faced. The fault pattern looked like a crooked jigsaw puzzle, with too many tiny pieces too close together. Faults could slip further. Volcanoes could erupt, shoving the plates against each other. Perhaps they would release the pressure. Or, they might intensify the magma chambers. This could go back and forth for millennia, or maybe a month. After what Amber had said about Yellowstone last night, no wonder the military leaders were calling for help.

"General Nord," Dr. Rebecca said. "We do not have enough information about faults on any of the local military installations. They are surrounded by faults along the western edges, and right down the center of White Sands Missile range."

Letting that sink in she walked back to the table. "Sirs, is there any danger; either to the bases, or the public, from buried nuclear weapons?"

The men shifted. They watched to see who would speak first.

Dr. Rebecca put her hands on the table and leaned forward toward them. "I realize you consider it a national secret, and are unable to tell us. You called us. We are here to help you. If one of those weapons is on an unknown fault line that slips, splitting a nuclear weapon in two, what will happen?"

The warmth drained out of Alex's face. A fault could effectively slice a nuclear warhead like a knife through butter. Any sudden jolt would rattle them if they weren't held fast. As the earth slipped, one part would move, while the other stayed in its original place. No amount of planning or protection could prevent, or withstand the crustal movements, especially if they rebounded from the combined quakes and volcanic eruptions.

The colonels shifted position in their chairs.

"I know," Dr. Rebecca said. "You cannot tell us. However, you may want to put your specialists on this, to decide the safest way to store them at this point."

She turned back to the map. "I can tell you, the ground has shifted around each fault line on this map. No piece of ground is in the same place it was a month ago. Until then, the movement hadn't changed much in recorded history."

Dr. Rebecca pointed to the San Andres Faults. "We do have some data on these faults. Most people think of the San Andreas faults in California when they see this fault group's name. Multiple faults with almost the same name are confusing. San Andre's faults are a danger to every person in this room, and every person in this state. Will they move more in the near future? We don't know. Based on the last few weeks? Yes. We have to be prepared."

Dr. Rebecca picked up a print out to hand to the Colonels and the General. "We need to be able to work with your specialists to protect ourselves, the bases in this heartland, the rest of the state, and the country."

She left the marked map on the wall.

General Nord said, "Can we have copies of your information?"

"Certainly. I have it all saved on a disk drive, the latest as of a few hours ago. The packets my assistants handed out will help as well." She handed the General a thumb drive.

General Nord walked to the door. "The meeting is over for now. We will contact you if we need more information." The other Colonels stood and followed him out of the room, leaving the two escorts behind.

Dr. Rebecca turned off the machine and said, "Alex, it will be okay. We will do the best we can. Will you carry this for me?" She handed him a pile of papers.

Amber stared wide-eyed at the screen.

Had she seen the same thing he had?

Chapter 11

Kirtland AFB to The Valley of Fires State Park, New Mexico

Amber grabbed her laptop, and one pile of papers. One last glance at the screen showed the Rio Grande like a giant zipper that closed up the continent. If it unzipped from New Mexico, the country, and the world, would never be the same. She needed Karen now. Karen would tease her in their history teacher's voice about always seeing the worst, and never the best in people, and events.

Dr. Rebecca turned off the projector and packed it in a bag.

Eyes unfocused, Amber turned and followed Alex out the door.

Her mom and Brandon already sat in the front of the vehicle together. Just this once, what she wanted more than anything, was to nestle next to her mom and pour her heart out, like she had when she was six, and dad disappeared.

Several of Dr. Rebecca's students laughed behind her.

Amber lifted her head and climbed in beside Alex. She sat as close to him as she dared, hoping the minuscule contact would prevent tears from forming.

Karen would have laughed it off, and they could have whispered to each other, to control and analyze the situation. Should she open up and tell her mom once they started?

Dr. Evan would have to drive them back to camp, and she didn't know him. Best to wait till they were back to camp and alone together. Mom would listen then, and know what to do.

Alex reached for her hand and tried to smile.

"Hope the guards didn't ask Corbo for his identification," Alex said.

"I hope not as well," Dr. Rebecca said.

Dr. Evan started the vehicle. "I know the guard. Unless Corbo said or did anything stupid, he won't ask."

"That hour meeting must have seemed a month to him," Alex said.

Dr. Evan drove the vehicle to the guard shack.

Corbo stepped out grinning. He walked up as Dr. Evan parked for him to join them.

"Hi everyone," he said. "Glad you came back when you did. Livia is threatening to come rescue me." Corbo climbed into the back of the vehicle.

"Corbo when did you find out about your legal status?" Alex asked.

He looked up at Alex. "A few years ago. I finished school and tried to find a job. Migrant work wasn't for me. I wanted a stable life. Without a social security number, I didn't have a chance. One man offered me some advice, and even a couple of days pay under the table. Enough he said, for me to find another place to go."

"He did more than that," Dr. Rebecca said.

"Yes." Corbo twiddled his fingers. "He sent me to you. Since you work for the university, you could find a way for me to be here legally, he hoped. We found complicated a way. I sometimes wish we hadn't."

"You don't have much of a Spanish or Mexican accent," Tom said.

Corbo laughed dryly. "Yeah, that's part of the problem. I don't know much Spanish. I was never allowed to speak it at home, or learn it at school. My father threatened to whip me if he heard I was speaking in Spanish."

"That's horrible!" Amber said. "Why would they want to deny you your culture?" Many migrant workers lived and worked in California; did they live in fear as well?

Corbo turned toward her. "It gets worse. Shortly before I left home, I heard my younger brothers speaking Spanish. My parents ignored them, until they saw I was standing in the doorway. Then, my father yelled at them. Later, when he thought they were alone outside, I heard him say they could speak all the Spanish they wanted. Though, not in front of me."

"Did he ever say why?" Amber asked. Something about his story didn't make sense. It shouldn't be okay for his brothers, and not him.

Corbo nodded. "Once he said I had a better chance in life if I never knew Spanish. I might be able to find a better job. I guess they saw being Mexican as what held them back."

"Didn't they speak Spanish?"

"They must have at one time. They have the accent. Every now and then, mom would let out a few words that were Spanish, or maybe her Native Indian heritage. They never even talked about the Middle American Indian group our family comes from. I don't know who I am."

"Shame is a terrible game," Dr. Rebecca said. "It makes people do strange things. Shame, fear, and politics all do. I think you do have a good chance Corbo, and soon we will make it all work out."

"Did you ever go to a driver's license branch Corbo?" Alex asked.

"Once. I didn't know I needed a social security number. Before I had a chance to say anything, they pointed me to a line for Spanish speakers. I was laughed at there, as I didn't speak any Spanish, and had no idea what they were saying. I was so embarrassed. I left and never went back." He closed his eyes and lowered his head.

Corbo twisted his hands. "Sure, like every kid here, I know a few basic words. I can never be sure they mean what I think they do. For some reason, I tend to tune it out when I hear others speaking it. It's funny, people who know I speak good English, expect me to be able to translate for people who only speak Spanish. Embarrassing for them, and me."

"Do you like Livia?" Amber asked. He hadn't said much nice about her.

Corbo waited a few minutes before responding. "Hard to say. Basically, it's almost an arranged marriage in many ways. I don't really know her. And, what I've seen lately, I don't like. She's getting scary now."

"Do you want to back out?" Amber asked. Marriage without liking the other person would be miserable. In fact, marriage laws were what had kept her mom from remarrying when her dad disappeared. There had been no way to determine if he was alive, or dead. She was legally trapped in a marriage that didn't exist, and couldn't move on with her own life when Brandon's wife died.

"Yes. I think so. I don't think Livia's worth it. There has to be some other way. If only I could apply at the university as an exchange student. Without school records they won't consider me. Those I have, I can't prove are mine."

"What does Livia expect out of the marriage?"

Corbo laughed. "She thinks a lot of kids and family. Sure, I have parents and siblings. Livia won't know them. I don't talk to them anymore. I don't like the way they live. Kids are something I really don't want. I couldn't teach them who they really are, and they'd be as lost me." He paused and stared out at the scenery. "There is no way, or place, to raise kids in this barren landscape."

He glanced back at the group. "Her last call, I don't like it."

"What did she say?" Amber asked. Her hands gripped her laptop case handle as Dr. Evan rounded a curve.

Corbo took his phone out of his pocket. "She said her group wanted to picket the state capitol. They want the nuclear stuff to be moved away for the safety of the families that live here."

Dr. Rebecca glanced at Corbo. "She won't find a more remote, less populated area in this country. Though, a less seismically active area she might find. Even Alaska has earthquakes, many dormant volcanoes, as well as moving ice sheets. Not stable there either. Did she say when she was going to picket the capitol?"

Corbo shook his head and put the phone in his pocket. "No. I figure tomorrow, or the next day. She blames the military for the recent quake events. She doesn't see anything else."

"If she were away from them, maybe things would improve," Amber said.

"How could we do that? They like her more than her parents do," Corbo said.

"Not a bad idea, Amber," Dr. Rebecca said. "Maybe she can join Alex and Tom. They might mellow her out."

"Not if she's girly, please," Tom said.

Laughter floated through the vehicle.

Chapter 12

The Valley of Fires State Park, New Mexico

Scenery sped by on the interstate. Before too long, they saw Dr. Rebecca's van on the side of the road, with a tow truck hooked up to it. The back end squashed, and the front dented, it wasn't going anywhere on its own soon. Traffic had cleared.

The scenery reminded Amber of many places she had been with her mom. They had always been close. Now, distance grew between them, though they were only feet apart.

Dr. Evan reached their camp with no trouble. No sign of Livia or her group of protesters on the road, or in the park.

Amber stepped out of the vehicle. Nothing appeared out of place. A few minutes to herself would be nice. Perhaps mom would come looking for her. She walked around to the sleeping quarters and unlocked the door. Warmth pervaded the trailer. No time for a refreshing nap. Time to sort through her backpack, and decide if anything could be left out to keep the weight down the next day. Everything she had would be needed, though not every moment.

They may be here for a while, and a weekend's worth of clothes would mean extra washings. If she kept everything with her, it wouldn't be lost. Karen's picture connected her to the stability she had grown up with, even as she traipsed active fault lines around the world. She pulled out the "Ring of Fire" pillowcase, trying to decide if it was safe to leave it on the bed.

The trailer shook.

It rocked and swayed.

Dishes crashed off the counter in the kitchen area.

The bed shook violently, nearly throwing her to the floor. She balled up the relic pillowcase in her hand, and stuffed it back into her bag.

The front door banged.

"Amber, are you alright?"

"Yes, Mom. I'm sitting on the bed."

"Don't move then. It should be over in a minute."

The wave rolled right through her. Similar to how loud music vibrates through the body, when a car goes by with its stereo turned all the way up.

The shaking slowed until the vibration could no longer be felt.

Amber slung her backpack on and hurried to the door.

Her mom stood outside, checking the scenery.

Trees shook as branches and leaves settled back into position. Some limbs and leaves covered the ground at their bases.

"Come on. Let's go make sure no one fell."

They rushed across to the open back door of the other trailer.

No one was visible inside.

They rushed through to the front door, opened it, and searched for the group. They were on the ground about thirty feet away.

"Is everyone okay?"

"I tripped and have a tiny cut. Otherwise, I'm okay," Alex said.

Dr. Rebecca clutched her phone. "Guess we better check the computers and see how close that one was. It was strong."

Sirens blared in the distance.

Amber walked to her computer and dropped her bag beside it. She logged in to one site. The screen buzzed with activity. "Preliminary reports are saying a 6.3 at the Magdalena Peak." She turned to Dr. Rebecca. "It may be higher. The observatory is offline."

"It's worse," Tom read from his screen. "The interstate we were on a few minutes ago shifted." His pale face turned to Dr. Rebecca.

Dr. Rebecca stifled a cry and grabbed her phone. She pushed the buttons and waited. "No cell reception. I hope Dr. Evan is okay."

"There's a lot of damage. We'll have to access the data as it comes in." Tom pecked at the keyboard.

"Tom, let me set up one site, then you will have all the emergency responder information as it comes in. We need it real time, not the filtered stuff that the news puts out afterwards to prevent panic." Dr. Rebecca pushed him out of the way and logged into three sites on his computer.

The ground readings continued to shift on Amber's screen. Once it settled the deformation rates would mean something. Amber waited. "I'm not sure I would want to see how much the land has changed."

"In some places, you wouldn't notice it. In others, the ground would be so different that if you had known every inch of the area, it would appear to be a totally new place." Dr. Rebecca speed typed on Tom's computer.

"Dr. Rebecca, what if our equipment fails?"

"If it does, then we are back in time. We'll be fine. Corbo has a supply of both firewood and food set aside if such an event happens." Dr. Rebecca said.

"Others probably don't," Amber said as she checked another site.

"Most people will have access to at least a few days' worth of food, well water, and a grill."

"The well water could be contaminated though," Alex said. "I do know that."

Dr. Rebecca closed her eyes. "That would start a panic. The governor has to approve notifying the public of anything this serious."

Dr. Rebecca walked over to the counter. "Corbo, we will have to face Livia once again. She wants what she thinks is best for the people. Call the governor's office and Mr. Spike, head of the local mining regulation group. We need to meet with them as soon as possible."

"We don't have a vehicle." Brandon said.

Dr. Rebecca's phone rang, and she grabbed it. "Dr. Evan, are you okay? Good, come back here then. We need you here more than anywhere. See you as soon as possible."

She turned to the group. "He stopped when the ground shook. The interstate shifted in front of him. He thinks he could drive through. The risk is too great to continue." Dr. Rebecca turned to Brandon and Amber's mom. "General Nord has ordered him to return to us and stay here until morning."

"We have lots to do then. Let's keep busy until Dr. Evan arrives. Who knows how bad some of these roads are," Amber's mom said.

"His vehicle should be fine for the terrain," Alex said.

"Sure, that transport vehicle may be fine. He'll have to dodge all the other vehicles that were stranded, shifted, or on moved sections of roadway. It'll be a minefield of cars and scared people on the interstate, especially since rush hour started about ten minutes

before the quake." Amber's mom placed her coffee cup beside her computer.

Amber wanted a chance to talk to her mom. Now though, Dr. Rebecca needed her to sort the data. There wasn't time.

She blinked as the words and numbers blurred on the screen.

No time for emotion. Time for facts and hard work. Adult work was interfering with her thoughts and emotions in way she never expected.

One screen filled with the numbers of the current location.

Alex touched her arm.

She glanced up.

He nodded.

She opened another window. A background search on Yellowstone and the areas local to it could run at the same time. It would slow her main search down, so she'd have to toggle between screens. She had to put the numbers in correctly to run the simulator accurately. One mistake, and it would be wrong. Her hands shook as she slowly typed each number, verifying it was correct.

No point in worrying mom or Brandon unless they had the facts in front of her. If she and Alex were overacting, Dr. Rebecca might send them home. They couldn't take time away from events at hand. If they thought Yellowstone was involved, one of them would have mentioned it.

"Want some chips?" Alex asked.

Amber nodded.

Food would at least keep her hands busy as her heart pounded waiting on the reports to complete.

Emailing Karen might be the next best thing to talking to her in person. Karen knew all the same contacts she did. And someone researching in a less rattled area would help their cause.

Chapter 13

The Valley of Fires State Park, New Mexico

Alex filled a tray with tea, chips, and cookies. Someone really needed to cook a solid meal for energy to work on. Too bad Livia wasn't here, her deli experience would allow her to cook for the hungry crowd of scientists. If mom were alive, she'd find someone locally in a heartbeat. In fact, she probably had known someone at Dr. Rebecca's university who would be glad to help.

Classical music filled the air as Dr. Rebecca's phone rang. "Hello. Yes. Sure."

Alex carried the tray to Amber and Tom.

Amber reviewed Dr. Rebecca's notes. More data filled the screen, as the readings continued to shift. The computer was programmed to find certain associations with combinations of the data. Normally, they projected from centuries of data in the past, forward to centuries in the future.

Amber worked with the data to restrict it to showing only the next few hours, then days, and finally weeks. Her face grew paler and paler. She checked and rechecked her notes, fingers shaking.

"It can't be right," Tom said.

The map showed massive changes in the shape of the continent. Luckily, it was the lesser populated central regions which showed the most change. Days, or weeks, wouldn't be enough time to evacuate. Some would choose to stay behind no matter what. This simulation program hadn't been proven to be accurate to the day, week, year, or even decade. What the program showed, could create a panic that would never be forgiven, if it was wrong.

Alex sat the tray down. "It can be. We hadn't said anything yet, we wanted to check the data first."

The screen blinked red and green.

"What! What did you say?" Dr. Rebecca shook her phone. "The connection is gone."

The overhead lights flickered off.

Dr. Rebecca's phone slid out of her hand, and onto the table. "Oh no."

The computer screen faded.

"Save what you can! Back up batteries aren't fully charged."

Amber hit save, as her screen faded out.

The loss of the data was bad. There hadn't been time to print it, and no one would believe them without seeing and duplicating the simulation.

Amber shook.

"It's okay, we'll redo it." Alex handed her some hot tea.

"The circuits are overloaded. Corbo go check it!" Dr. Rebecca wrung her hands.

Corbo rushed out of the room to the electrical boxes in the back.

"Who was on the phone?" Amber's mom asked.

Dr. Rebecca shook her phone again. "General Nord called back with some details about who he wanted to invite to the next meeting. It cut off. Check your phone, Claire."

Amber's mom opened her phone to check. "No bars. Nothing."

Amber grabbed her phone and checked it. No connection.

Faces drawn, the group waited on Corbo and the power to return.

"Cut off from the world," Tom said.

Brandon walked to the window and opened it. "We'll need air. We've been without power in the field for days sometimes. Many aren't used to living without it, and won't be happy."

"That quake could have damaged something at the power plant, or caused an accident that took out a power pole somewhere. There's no way to know at this point." Tom picked up his notes.

Dr. Rebecca picked up her coffee cup. "We've been so busy studying the quakes we forgot to think about what else might happen. I thought it best to be in the field, near the events, not far away waiting on data to pour in. I hope one of the other teams can pick up our data if they realize we are offline."

Amber's mom walked to the kitchen. "Guess we better clear the fridge of food. All we can do is wait and see what was damaged, and how badly. We won't lose data being transmitted to the satellites from the latest quakes. It'll still be there when power comes back."

Dr. Rebecca closed her notebook. "I'll have Corbo start the small generator. It won't run the computers for long. A powerful generator might be stolen, so they only gave us a tiny one, thinking

we wouldn't need it. We should be able to have some coffee and wait, until Dr. Evan arrives anyway."

A car screeched to a stop in the parking lot.

Alex ran to the open window. "Whoever it is doesn't look happy."

"Oh no. It's Livia," Dr. Rebecca said. "We don't need her drama right now. I need Corbo's help."

Corbo rushed out the back door toward her, talking as much with his hands as his mouth. His arms waved in the air.

Red-faced Livia shooed back at him. She waved him toward the trailer, and pushed him back toward them.

Alex laughed. Corbo and Livia were so alive in this moment of electronic disaster. Nothing could quail their communication. They talked while Livia reached back into the car.

Amber walked up beside him. "They won't like us watching."

Alex turned away from the window. "We need to find out more about them to help them. Maybe they can help us more than we realize."

Amber's mom opened the freezer. "Dr. Rebecca, is there a grill for the hot dogs and hamburgers? I could try to set a pan nearby for the baked beans as well."

Dr. Rebecca joined her, "There should be a whole campfire cooking kit around here somewhere. Used to use it with students at night, when four or five hours of checking data seemed like a long day."

She scrambled through cabinets, pulling out pans, printer paper boxes, and even a few trowels.

Corbo opened the door.

Livia walked in. "Sorry everyone. I was upset that I couldn't reach Corbo."

Dr. Rebecca stood up from a bottom cabinet. "Hi Livia. You might as well join us. We aren't sure how long we will be without power."

She shifted through another cabinet. "Corbo can you help me find the camp stove and pans? Did you put them somewhere?"

"I think they are in the back room with your filing cabinet." Corbo walked down the hallway.

Livia pulled one of the chairs away from the table and sat down.

There had to be a way to convince her to talk. Alex wanted to know if she was as bad as Corbo said. He pulled a chair up and sat near her.

Tom pulled his chair over. "Livia, tell us about yourself."

Livia tapped her feet and fiddled with a pencil. "I don't have much to say about me. I am going somewhere, busy all the time."

"What do you enjoy?" Amber asked.

"Enjoy? I don't have time for fun. I have lots of work to do." Livia glanced at the ceiling.

"For who?" Alex asked.

"For my family of course. They expect all of these great things of me."

"What do they expect?" Alex reached for the tray of snacks and offered a cup of tea to Livia.

She refused. "No, idea. They say they believe I can do anything I set my mind to." Her hands trembled in her lap.

"Did they point you in any direction?" Alex asked.

Livia glanced up to him looking right at her.

Amber drank some cooled tea.

"No. They are too busy running their deli. They never see me. Or hear what I say. It's always, 'We are sure you are doing well.' What can I do?"

Amber reached out to her. "What do you want to do?"

Livia glanced at her, and gaped. "I."

"Here are some candles," Dr. Rebecca interrupted. "We won't light any right now. Unless anyone wants coffee, we will save the generator for morning. The temperature will be okay, at least until nightfall."

Amber's mom sat her notebook on the counter. "I made a pot of coffee before the power went out. We better all enjoy a cup while we can. Perhaps, Livia and Corbo could walk up to the park entrance and see if anyone has any news from a short wave radio."

Corbo nodded. "I can go. Livia do you want to walk with me?"

Livia tapped some pencils on the desk and ignored the group. She shook her head and stared at the ceiling.

"He'll be back soon," Dr. Rebecca said. "Have something to drink."

Livia reached for the cup of tea.

Corbo took her hand, and kissed it. "Don't worry."

Alex turned away. If Livia had a tear in her eye, he didn't want to know.

The chair bumped Amber's full backpack, knocked it over, and spilled its contents.

Alex helped Amber pick up the mess he had made. At least she was friendly. Corbo's assessment of Livia might not be far off.

Chapter 14

The Valley of Fires State Park, New Mexico

Amber fingered the pillowcase in her lap.

The door banged shut.

Tires crunched on gravel.

She slipped the pillowcase into her backpack, zipped it shut, and followed Alex to the window.

The transport vehicle parked away from the door. Dust covered dents in the doors verified the drive back had been less than gentle. One tire landed in a mud puddle. The water to the trailer must have sprung a leak.

Corbo crawled out from under the trailer covered in mud.

"Had to fix the leak. Think I have it turned off."

Dr. Evan nodded and pulled a box out the vehicle.

"General Nord had a short wave radio in the vehicle."

"Good. Dr. Rebecca sent me to find out if the ranger station had heard anything. I hadn't made it there yet." Corbo took the radio box.

Together, they walked back to the trailer.

Dr. Evan opened the door.

Corbo stepped in and sat the radio on the counter between the computers and the kitchen.

"Let's keep the radio covered up when we aren't using it. Wouldn't want it stolen." Dr. Evan said. "Guess I'm here tonight without provisions or clothes."

"I might have something you can borrow," Brandon said.

"Any news?" Dr. Rebecca asked.

Dr. Evan turned the dials of the radio. "Not yet. When the radio beeped, it sure scared me. When everything went quiet, General Nord paged it to go off. He told me he lost contact while talking to you. His directions are to rest up here tonight, and leave soon after dawn. It'll be dark before long. Hopefully the electricity will be back on, and there won't be any looting."

Amber shivered. They had all seen looting on television. It always seemed like someone else's problem. Something the town, or their government, had brought on themselves.

To clear her thoughts, she walked outside. A small bench under a tree nearby would be a good place to think.

A few minutes later, Alex came out and sat beside her.

She ignored him as she viewed the barely altered physical landscape.

"I don't want to scare you. You shouldn't go off alone." Alex picked up a stick and pointed at the shrub brush.

"Did my mom tell you I do that?" Amber glanced up at him.

"No." He reached for her hand. "It's common for intellectuals to explore alone. We have to have space to contemplate. At least, I think so. Who knows what dangers lurk in the park. If you wander off alone anything could happen." His eyes peered into hers.

Amber pulled back and nodded. "I need to think."

She picked up a branch and drew circles in the mud near her feet.

She drew a big circle at the top, another big circle near her feet, then a small circle next to her shoe. A line snaked between them.

The trees and landscape looked almost the same as the day before. Underneath, it could be a different story. If quakes and power outages continued, the military couldn't keep the secret much longer. The population would know something wasn't right and demand answers.

Scenes from movies and news shows played in her mind. Actions fed off of actions. Scared people acted without thinking; while those who should have acted reacted out of fear.

Fear of the people, and for the people, so often led to inaction. Sometimes, inaction was the right answer. Other times, people, thousands of people, died due to inaction. If the reports she had seen were what was happening, there really was no answer. Millions of people could die. There had to be something she could do to save people.

"Alex, it's bad. What do we do?"

Alex took her hand. "If the power hadn't gone out, we could have printed that report, and convinced Dr. Rebecca. Without her approval, no one will believe us."

Amber tried to draw the outline of the southern half of the United States. Another documentary flashed through her memory. Tiny dots lined below the state outlines. "These quakes will affect the oil refineries if they become any stronger. If we don't do something

soon, there won't be gas to power vehicles to transport people to safety."

Alex closed his eyes. "Dad faced such tension when he traveled to remote countries to study erupting volcanoes. It was always temporary though. Our country always sent relief until they could be back up and running."

Amber stared at her crude drawing. There'd be no one to send enough relief to them. Unless the whole world tried at the same time.

Alex drew a line through the mud puddle. "If we stay inside, it'll stay warmer longer tonight."

"We'd all have to go to the other trailer, since that's where we'll sleep."

"True. Maybe we can find a way to convince Dr. Rebecca without the report."

Amber stood up and walked to the brush pile nearby.

A mouse ran out and away from her.

Sharing a room with Livia didn't sound near as fun as Karen. She couldn't connect with someone who stared at ceilings and didn't like Dr. Rebecca. "Mom will probably make me share my room with Livia. What do you think of her?"

"I'm not sure she knows what to think of herself. My room will have Tom and Corbo. All four adults will be in the other two bedrooms. Your room isn't bigger than a closet though."

"All of us together will provide body warmth to ward of the desert chill, like our ancestors. At least we don't have any luggage to take up space." Amber smiled up at him.

Alex stood up. "I don't think we'll all sleep in the living area. Isn't enough room there either."

Amber smiled. "Not even a couch to stretch out on."

"Let's go back in. Tomorrow we have to be ready for a more intense meeting, if we can make it back to Kirtland. We have lots of work we can do before dark."

Chapter 15

The Valley of Fires State Park, New Mexico and The Little Italy Deli

The following morning the sun peeked through the tiny window in Amber's room.

Livia slept, taking up as much of the cot style bed as she could.

Amber grabbed her bag, and tiptoed into the living area. At least by sleeping in her clothes she was ready to go. She pulled out a map to review the local geologic formations. From memory, she marked the recent changes.

She picked up her phone to call Karen to verify her notes.

No phone reception. There hadn't been an answer to her email before the power went out either.

The pages and notes slipped out of her hands and onto the floor. Karen wasn't there to point out errors, and add context to her understanding anymore. Certain aspects Karen knew far better than her. As a team, they'd always complemented each other. She'd have to become more familiar with Karen's specialties while going it alone.

Without phones and electricity, Karen, the internet, and all her usual resources didn't exist. Memory reliance practiced in the field meant she had a chance, though no way to double check her facts. She pulled her thoughts together and picked up the pages to mark the changes from the latest reports before the computer turned off.

Maybe where the meeting was going to be would have electricity, and they could dig up a few last minute reports. Of course, Dr. Rebecca probably already thought of that, and had her students working through the night to sort them, and bring them to the meeting. She had called General Nord on the short wave radio the evening before.

Amber and Alex had decided not to mention to Dr. Rebecca or her mom their findings. Both were too worried already. Alex had said he'd call his dad as soon as he could.

Brandon and Dr. Evan walked in.

"Good morning. Did you bring the sunshine in?" Brandon asked.

"No." Amber closed the brochure. "It is pretty, though. I have most of the changes documented on here."

"Good. Your mom and Dr. Rebecca will be ready to go soon. Guess I better wake the young men."

Amber stretched. "Guess I should wake Livia."

"Let her sleep." Dr. Evan started down the hall, then turned back, "No, we better not leave her here. Not safe for her, or us."

Dr. Evan reached the door and knocked. No answer. He opened the door and turned back to the living area. "They're all gone. Amber did you see, or hear them leave?"

"No. Where could they be?"

"I'll check the other trailer. This is not the time, or place, to explore without notifying each other. Brandon, you tell everyone here to be ready to go. It's going to be a long difficult ride."

Amber hurried to wake Livia. They had been up as late as the sun shone discussing plans for the meeting today. Sleeping late didn't make sense on such an important day. "Come on Livia, we have to go."

Livia had sprawled out across the twin-sized bed.

"Alex, Tom, and Corbo aren't here."

Livia's eyes jerked open. "Where are they?"

"I don't know. Come on."

They hurried out of the trailer. They couldn't have gone far. There was no reason for them to go anywhere anyway, except to prevent the toilets from overflowing.

"Alex, Tom, Corbo, where are you?" Dr. Evan called.

Amber ran around the work trailer with Livia right behind. Alex had warned her last night not to go off alone, and then he did it himself.

Dr. Evan met them at the transport vehicle. "They've been in the work trailer, not sure when. A burnt down candle was left next to Tom's computer. Not lit of course."

Bushes crackled.

A rabbit scurried across between them and the trailer.

Dr. Evan and Brandon turned to the sound.

Tom strolled into the clearing followed by Corbo and Alex.

"Sorry," Tom said. "We planned to return before everyone woke. We had to retrieve some of the data from the closest equipment we

set up the second day." He held out his backpack. "It's full of reports."

Dr. Rebecca sternly said, "You could have been hurt or killed by scared people or wild animals."

Corbo opened the transport vehicle door. "Alex and I each have a gun and plenty of ammunition. It would take more than a wolf pack to kill us."

Livia glared at him and marched to the vehicle.

Amber followed and sat midway back. Her backpack rested between her knees.

Alex slid into the seat beside her.

She glared at him.

Alex adjusted his pack. "Sorry. Didn't want to wake Livia, or you could have come along."

"Did you sleep enough to be able to present today?"

"I'll be fine." He leaned back.

Tom handed one of the print outs to Alex.

Dr. Evan started the vehicle. "This trip may be dangerous. I brought the radio, in case we become stuck and need it. Don't mention it if we are stopped. While we don't want to think about weapons, I'm glad Corbo and Alex each have a gun."

Alex motioned to his pack. "While not much of a shot, I can scare someone."

Dr. Evan nodded. "People become scared and dangerous when the ground moves, and the power goes out. A stick, or almost anything, could become a weapon for, or against us. We may need protection soon, if things don't improve. The communities are beginning to take notice of the quakes." He started the vehicle.

The road was smooth and clear, no signs of devastation, or a reason for the power to be out. Grass and weeds grew along the edge, and small rocks littered the ground.

"We have about sixty-five miles on this interstate. Not much has changed here. However, before we reach the river." Dr. Evan's voice trailed off as he steered the vehicle onto the interstate.

Trees and brush had fallen around a trailer in the middle of a field. Desolation and emptiness hid possible signs of damage while the vehicle moved at highway speed. Buildings showed signs of wear and tear from the stress of repeated quakes. A few teetered,

and roofs had slid on old barns. None were close enough to check for cracks in the walls or foundations.

Amber checked her phone. An area with electricity and cell phone coverage would ease their concerns. As of late last night, there had been no official word on the cause of the power outage, or its extent. Of course, since anyone with a radio could listen, they had been careful with their communications with General Nord's assistants.

Dr. Evan steered the vehicle carefully, giving them a chance to observe the landscape. "Here's the last fourteen miles to the interstate change now. The road is worse. Visible road deformation begins about ten miles away. I have to slow down. Corbo, Tom, Alex, watch the sides and back. This military vehicle may draw unwanted attention."

"Dr. Evan?" Livia said, almost in a whisper.

He didn't acknowledge her.

"Dr. Evan, Livia has a question," Amber said.

"Well, young lady, speak up. I can't take my eyes off the road here."

"Can we stop at the next exit, and check on my parents? I haven't been able to reach them. They may be worried about me."

Dr. Evan steered around a pothole. "Dr. Rebecca, do we have time?"

Dr. Rebecca checked her watch, and sighed. "I suppose so. It would be a good idea to pick up some food, even if Italian isn't my favorite."

"Thank you," Livia said aloud. In a whisper to Amber she said, "I hope none of my friends are there."

Dr. Evan pulled off the interstate. The exit was a fuel stop frequented by people who worked on, or near, White Sands. The Little Italy Deli was a tiny establishment, next to a gas station. At least the "open" light was lit up. The electricity was on here.

"Sandwiches would be good." Amber said.

Dr. Rebecca opened her cell phone to check for connectivity. "Livia, you, Corbo, and Alex go on in. I'll send Amber in a minute with orders and money."

Amber slid her laptop case out of the way, and handed her backpack to her mom.

Corbo walked to the door, and held it open for Livia.

Alex followed behind.

One minute he seemed like a nice person. The next, he did things that annoyed her. Yesterday, he treated her like an adult. Today she was a pesky kid to be left behind.

Chapter 16

The Little Italy Deli

If only Amber would understand, he wanted to protect her. There was no need for her to hike all night to the equipment stations. They had to be sure it worked with only solar power. Even that might not last long, if the satellites didn't swing back around soon.

He followed Livia and Corbo into the deli.

Livia's parent's reaction to Corbo would clarify their true feelings for Livia. Maybe meeting her parents would help him know how to help Corbo.

"Hello Daughter!" The voice boomed as Livia walked in the door. "Glad you are okay. We worry about you. Come here. Come here. Who is this?" The man at the counter smiled and wiped the glass with a dingy rag.

Corbo followed slowly, with Alex right behind.

"Is this little big guy the one you have been telling us about? At least he looks healthy!" Livia's father patted Corbo on the back.

"Customer. Wifey! Wifey! Customer! I have found that if I shout 'wifey,' no one else answers. To her name of Anna, so many answer." A deep, hearty laugh followed this statement.

Livia groaned and lifted her hand to her eyes.

The door swung open and a small woman, noticeably similar to Livia stepped out. She glanced up from the basket she was carrying. It fell to the floor as her hands covered her face. "Eduardo?"

Silence echoed through the shop.

Livia's mother almost slumped to the floor.

Her father hurried around the counter to her. "Who?"

Her mother opened her eyes. "He looks like Eduardo, the one who disappeared before I met you. His hair and eyes are Eduardo's. Almost the same age as Eduardo was then."

"Come, sit, and tell the story. Always time for stories. Tension relievers." Livia's father shook as he led Livia's mother to one of the customer tables.

Livia and Corbo sat across from her.

Alex pulled up another chair.

Livia's mom gabbed Corbo's hand. "Tell me."

"I'm Corbo. I think I heard my mother say the name 'Eduardo' a few times, when I was really young."

"How old are you?" Livia's mom asked.

"Nineteen, a few days ago."

She nodded. "About the right age." She reached out to Livia's hand. "Eduardo, a professor, was my first love. I was sweet sixteen; and hadn't met your father."

The woman glanced up at Corbo. "He never led me on. I didn't know he was married. He came to me one day, and told me that he must go bring his wife, Adora, her sister, and her sister's husband here. His wife was due to have a baby in a month or more. So he wanted me to have a house set up, and be the babysitter."

She patted Corbo's hand. "Tell me about your parents Corbo. What is Eduardo like now?" She glanced up at him.

Corbo shook his head. "My dad's name isn't Eduardo. It's Jon."

"No, Jon was the brother-in-law's name."

Silence filled the store.

Corbo's shoulders shook.

"What happened? Did Eduardo ever come back?" Alex asked.

Livia's mom lowered her face. "I never saw him again. I kept the house ready for a long time. Livia, you were born there, after I met and married your father. Then, we moved here. I had forgotten Eduardo until now."

The door banged.

Alex glanced up. "It's Amber. Go on, tell us more."

Amber joined them beside Alex.

Livia's mother shook her head. "There is nothing more to tell. What can Corbo tell us about himself?"

Corbo stood; hands at his sides. His face stony and expressionless. "I, I don't know. So many things about my growing up never made sense. I wasn't at all like my parents or siblings. I left two years ago."

Alex placed his hand on Corbo's shoulder. "Do you know where to find them?"

"Maybe. Not today though. There's no time."

"Corbo, who does your birth certificate say your parents are?" Livia's mom asked.

He turned to her. "That is part of the problem. I don't have one. Or a social security card either. No proof I exist."

She gasped and covered her mouth. "Husband, find me my private box and the key."

Livia's father groaned as he lifted himself from the seat. He looked at everyone before he walked through the swinging door to the family quarters.

Livia's mom leaned toward Corbo. "I have copies of the papers for your mom, aunt, and uncle. He gave copies to me in case of trouble."

Corbo nodded. "If the ones who raised me are my aunt and uncle; where are my parents?"

No one answered.

The interior door swung open. Livia's father carried a box in. He sat the box down, and handed the key to Livia's mom. He glared at her.

Livia's mom opened the box. She pulled out a few things, and handed a sealed envelope to Corbo. "Here."

Corbo opened it and read silently. "My mom's name is Anna and my dad's name is Jon. This mentions them as his brother and sister in law. I never met Adora. It says he was to meet them and bring them through the border at. Wait, not there, not that date." Corbo covered his face.

"What? What's wrong Corbo?" Alex asked.

"My mom is terrified of that place. She said its name was never to be spoken in her house. Even my siblings couldn't say it. In school, we studied the major border skirmish that occurred there on the day Eduardo was scheduled to meet them. They could be among the unknown dead." He dropped the paper and scanned their faces. "Am I not who I think I am?"

Alex patted Corbo's shoulder. "We know your mom wasn't there."

"How?" Corbo said.

Alex smiled, "You are here. We have to find the people who raised you, and soon, to find the answers. Come on, we have a lot to do today. Dr. Rebecca and Dr. Evan are waiting." He held out his hand to Corbo.

This news from Livia's mom explained a lot of the inconsistencies in Corbo's story from the other day. He'd obviously

never met her mom, so he hadn't made up the odd stories then, and she wasn't making them up now. He'd figure out a way to help Corbo, if there was one. Someday, when Mother Nature settled down.

Corbo held the page at arm's length. "Can I keep this?"

Livia's mom took it from him. Weakly she said, "Let me make you a copy, please. I'll be right back." She leaned on her husband a moment before leaving through the swinging doors.

The bell rang as Tom walked in the front door. "Everything okay?"

Amber handed a paper to Alex, walked over to Tom. "Yeah. We'll tell you the story later."

Alex handed the food order to Livia's father. "Here sir, is the lunch request. Mine, Livia, and Corbo's orders aren't on here. Here is the money to pay. I am sorry for your confusion today. We didn't mean any trouble."

Livia's father took the paper and glanced at it as he sauntered to the counter. "What does my daughter, her chosen, and other friend, want?"

Amber leaned up against Alex for a second, and walked up to the counter.

Livia's father slammed the sandwiches together, glancing up at the group from time to time. No wonder Livia talked loudly and waved her hands. Her dad chopped at the sandwich bits as if he could chop the memory of Eduardo from his wife's mind.

Amber walked to the cooler to pick out a drink. "Alex what do you want to drink?"

Alex walked over and picked a bottle, handing it to her.

Livia's mother returned with the letter and a locket. She placed them in Corbo's hand, and clasped it closed. Then turned away, and hurried back through the swinging door.

As they left, Corbo took Livia's hand. "You don't have to come if you don't want to."

Livia glanced at him, and back at her dad, wiping the counter. "I should be with you. You'll need me." She stalked out the door with him following.

Livia's mom opened the door, wiped tears from her eyes, and smiled.

Amber, arms full of drinks, held the door for Alex.

Alex carried the cardboard tray of sandwiches for the scientists.

Livia's mom cared about her, and watched her close. And likely, her dad did as well. He didn't know how to show it under that rough exterior, like so many men. Not even sure I know how to show I care, Alex thought.

Livia might not be so bad, if somehow, she could find her mother's gentler side.

Chapter 17

Drive to Kirtland AFB, New Mexico

Amber munched her sandwich and tried not to think about the scene at the restaurant.

Livia's parents were calm compared to what might happen if Mother Nature kept rolling in her sleep. That thought made her smile. If Mother Nature went back to sleep, the quakes would stop, and the volcanoes wouldn't erupt. She could go back home to Karen soon, and beg her to travel with her, not stay in California with Jerry.

Soon after returning to the highway, they reached a line of stopped traffic. Dr. Evan inched forward for a mile before the reason became clear.

Police cars blocked the roadway. The police turned cars around and sent them back to go another way.

The vehicle nearly reached the front of the line. Dr. Evan pulled off onto the shoulder. He walked over to speak to the officers directing traffic.

Amber and her mom climbed out to examine the cracks and crumbled asphalt while Dr. Evan talked to the police officers. The roadside they were on was lower by about six inches, and the pavement had been shoved toward the right by about two feet. They couldn't see much movement here, other than the fracture in the road. They rambled off to the side, intent on studying the road deformation.

"We're so close to the river here. It will be hard on this part of the state." Amber pulled out her map and marked the deformation.

Her mom walked over to the median separating the two directions of highway. "Amber, come here and mark this too."

Amber narrowly avoided tripping over lose asphalt. She reached the side and stepped into the springy grass. Cracks in the ground showed signs of being more than tire ruts and summer drought. The ground was lower, almost a ditch, between the two highway ribbons. An unusual cone shape, as tall as she was, pointed to the sky. In some ways, it resembled pictures of Australian termite mounds. Something about it haunted Amber. It didn't belong here.

"Alex, Tom, come here," Amber shouted.

A policeman talked to her mom while Amber waited. "A car stalled as the quake happened. The road shifted, under the middle of the car. The tires didn't pop when he drove on up. He almost backed up and turned around."

Alex and Tom walked up beside Amber.

"The driver saw a plume of smoke, or so he said. He wasn't sure what it was. Ground seems sturdy enough, on the road anyway," the policeman said.

Amber pointed at the less firm, almost crinkle cut spot, and the cone. "What do you think?"

"Not sure. I need my pole. I'll be right back." Alex ran to the transport vehicle and came back with a long pole with a cup attached. He tested the ground with the bottom of the pole.

"Hey, Mr. Officer, there hasn't been any rain lately, has there?"

"No kid. Stay away from there. We don't know if it's safe." The police officer turned towards Alex.

Amber's mom stepped in front of the officer. "He's doing his job. The government called him to be their representative volcanologist. He has to determine if it's safe."

The officer stared at her, then back at Alex. "Okay kid. You look too young to know anything. If you hurt yourself, it's your own life."

One driver shouted that he couldn't turn around, he had to reach his wife in San Antonio before she had her baby.

San Antonio was around the bend and across the river. It should only be a few minutes' drive. There was no telling how far that driver would have to go to be able to cross the river safely.

The officer turned his attention to calming irate drivers and directing traffic.

Alex took a deep breath and walked forward as Brandon, Dr. Evan, and Dr. Rebecca came up to Amber's mom.

Amber stepped forward. She wanted to help.

Alex waved her back.

After a few steps, he stopped and tried to push the stick into the ground.

No recent rain meant the ground should be rock hard.

He was several feet from the mound. The stick went down several inches, and didn't meet resistance.

Alex turned back.

As soon as Alex reached the road he said, "Be quiet everyone. No loud noises. Tom?"

Tom lugged the COSPEC from the van.

Alex set it up quickly.

"I'm calling General Nord," Dr. Rebecca said.

Amber didn't want to listen to that conversation.

"We have time for a quick reading," Alex said.

Tom grunted as he turned the dials and shifted the machine around.

Several police officers gathered around them. One stayed behind to direct traffic. After what seemed a day; and could only be about twenty minutes, Alex faced the worried crowd. "The mound is a fumarole. Signs of carbon dioxide, sulfuric components, and other gaseous emissions are leaking out."

"Will it form a volcano?"

"Hard to say at this point." Tom packed the machine back up. "We have a lot to do. The meeting at Kirtland AFB is more important than ever now."

Amber gripped her cell phone.

Alex picked up the equipment and carried it toward the transport vehicle. "It might develop more. Or, it may let pressure off, keeping an eruption, and another quake from occurring. This one may let off steam and pressure, then disappear. It's difficult to say at this point."

"We aren't sure you can go on this way," one police officer said. "The bridges may not be in good condition. Inspectors haven't made it this far."

"We have to inspect as we go," Dr. Evan said. "Each deformation must be documented for our meeting. I'll go slowly when I can so they can take notes. Fast enough across the bridges to safely reach the other side."

One officer nodded. "I guess your vehicle is the safest it can be for such a trip. Good luck, and be careful out there."

Tom loaded the COSPEC back into the vehicle.

Amber settled into her seat, making notes as fast as she could.

Dr Evan backed up a few car lengths, to have enough speed to skip over the two-inch-high jagged bump. "Military tires shouldn't be damaged by the broken concrete, as long as no reinforcing steel punctures them. I'm not taking any chances." He wanted firm

control, and not have part of a tire become caught on a chunk of asphalt, potentially sending the vehicle into the fumarole.

Across the split, the road appeared safe enough. It could change in an instant. The Rio Grande followed most of the state from north to south and appeared as a ribbon on the horizon. Amber's stomach fluttered. Crossing the river on an earthquake damaged bridge was not the way she intended to celebrate summer vacation beginning.

"We'd better stop before the bridge," Dr. Evan said. "The officers said no one had been here to check its stability. Alex, bring your pole."

Outside the vehicle, everything appeared normal and safe. Appearances could be deceiving.

Alex's hands shook as he grabbed his pole. He walked forward and peered out over the great river.

This once beautiful, once swift moving river had formed after the rift valley that bore its name. Humans had dammed it in many places to prevent flooding. This caused the loss of many species that depended on the flowing waters. Without the annual floods, fish couldn't reach hunting and spawning grounds, and many plants could no longer reproduce naturally.

Yesterday, it placidly plodded along. Today, the waters churned, cliffs scarred by fallen boulders. Dust clouds billowed in the distance as more fell into the chaos. On this side of the river, the bank had broken back closer to the bridge supports.

Alex tapped the bridge with his stick. He took a level from his pocket and laid it on the surface where it joined the road. He shook his head.

Tom came forward with a rope and tied it around Alex's waist.

Corbo grabbed the other end. Both men held onto the rope, slowly letting it play out between their hands as Alex stepped onto the bridge. One step. Another step.

Amber held her breath. Alex wasn't giving into fear for his safety, and she never had either. She'd far rather be the one on that rope, showing she wasn't afraid.

Alex inched forward and tested the firmness with his pole. A few times, he stopped to check the level. At last, he was across. He examined the bridge supports for a few minutes, and started back, checking more areas along the way.

Tom and Corbo anchored the rope.

Amber ran over to roll it up.

Alex stopped two more times to retest the bridge level around the edges. At last, he reached their side.

"I think we can make it across. It seems sturdy enough. I don't see any cracks on top of the bridge. Better have the windows down in case. This side of the bridge is lower than the other side. I'm not sure if it was that way yesterday." Alex's knees wobbled. He sat down to drink some water.

"There are marks on the other side where the roadway appears to have shifted some. However, the ground underneath is stable, and under more of the bridge." Alex used his pole to stand up.

Dr. Evan nodded. "Moderate speed?"

Alex walked back to the vehicle. "Yes. Dr. Rebecca, they will need engineers out here to determine if anyone can safely use this bridge. I am not so sure I would want the public, or multiple vehicles, on it at one time."

She pulled out her phone to make the call.

Amber climbed back in.

Dr. Evan backed the vehicle up a couple of car lengths. "Better drive across quickly, before another a tremor."

The river glistened. No wildlife in sight.

Amber shivered as the vehicle reached the bridge.

The bridge swayed in the wind.

It groaned when they reached the middle.

Amber swallowed, holding onto the seat as hard as she could. She watched out the back window.

The back tires settled onto the road again.

The bridge surface appeared to bounce back up a little. Maybe it was an illusion as the heat of the day misted into steam off the surface.

Sirens wailed in the distance.

Police cars approached.

Dr. Evan stopped the vehicle.

"Did you drive across it?" The police officer peered inside.

"Yes." Dr. Evan rested his arm on the steering wheel, and turned his head out the window. "We have to study each deformation from here to the base. I wouldn't advise anyone else to cross it. The bridge is too wobbly. Maybe my imagination. I don't trust it."

"You've driven it before?"

"Several times; a few times in the last two days."

"Okay. We'll rope it off. Not many people are going far from damaged homes. There was a good bit of damage here in San Antonio. At least the power's on; in most places."

Dr. Evan pulled his head back in, and started the vehicle.

Broken bridges and loss of infrastructure would make population evacuation even more difficult with a lack of fuel. Amber covered her eyes, wishing she had the chart to show her mom and Dr. Rebecca. Then they could have shared it at the meeting today.

Maybe she could still have time to draw something.

She rummaged in her backpack for pencils.

Alex handed her one of his report pages. "Use this."

Amber tried to draw on paper what she had drawn the night before in the mud.

Dr. Evan hit a pothole, and the vehicle swerved.

Amber's pencil raced across the page, tearing it.

San Antonio, New Mexico teetered before them.

Chapter 18

Drive to Kirtland AFB, New Mexico over the Rio Grande and Through San Antonio, New Mexico

Amber clutched her paper and pencil.

The drive through town was eerie.

Residents swept broken glass into piles. Children wailed, and no one noticed.

People moved as if asleep, glancing from ground to building while walking. A few noticed them and held out their hands.

Amber pulled back from the window. They had no food or water to share.

Cracks in walls and foundations echoed the stresses they had endured one time too many in the last few days.

No other vehicles moved along the streets between the buildings.

A few minutes later, Dr. Evan paused. "A slight deformation here, though not much. Residents will bombard us looking for help. Examine it as I drive by."

A two-inch wide crack ran across the road. One side was higher than the other. Crumbled bits scattered along the street. Safe to drive across; uneven enough to trip a person when walking.

Amber wrote a note.

People noticed they had stopped. A few walked in their direction before Dr. Evan moved forward and wove through the debris filled streets.

Before long, they reached the interstate.

As soon as they pulled onto the interstate, other vehicles appeared. Trucks drove at almost normal speed, while leaving more room than usual between the big rigs.

A semblance of normalcy, for the moment.

Amber's stomach clenched and teeth rattled. If she was right, was it too late to save people? If she was wrong, would her mom and Dr. Rebecca send her home? At least then she'd be with Karen.

The road appeared smooth and safe.

After a while, the butterflies in her stomach settled.

No one had much to say, so she tried again to draw the picture. The pencil kept slipping, making a mess on the page. Maybe there'd be time when they reached the meeting.

Livia's phone rang.

Amber tried to not listen to the heated conversation.

Red faced, Livia closed her phone. "Turning it off. My friends want me to tell Dr. Rebecca to make the military go away. I don't think she has that much influence."

"No, I don't. None of us here do. We may need their help before long." Dr. Rebecca said. "Let's hope people remain calm."

The traffic ahead of them slowed. Most of the trucks were turned off at the westward exit. Police allowed one or two trucks through northward at a time.

Dr. Evan drove up to where the policeman blocked the Los Lunas exit.

"Hello travelers. Out of uniform? Where are you going?"

"We have to return to Kirtland Air Force base."

"Well, sir." The officer rocked on his feet. "Bridge stability is being questioned. Those who are turning off at the next exit can travel onward at this point. Go west here, and you might can reach the base through downtown."

Dr. Rebecca spoke over Dr. Evan's head. "Sir, we are the people sent in to study and evaluate the dangers. We have to see how the event has deformed the land, and the bridges."

"Um, names please." The officer leaned back and stared at the military vehicle.

Dr. Evan recited the names of everyone except Livia and Corbo.

"The vehicle appears official. Let me call it in." He stepped away and spoke on his two-way radio.

Amber couldn't quite make out the words he said. She started her drawing again.

The officer turned back to the window. "Okay. You can go on. You will have to wait at the next exit though. No one is allowed through without military authorization. Wait there until an escort is on the other side of the bridge in case you have a problem."

Dr. Evan nodded and restarted the engine. "Thank you sir."

As the officer backed away from their vehicle, Dr. Evan drove forward. "It's only a few miles, and we will have to stop again. We may have to wait a while for someone to arrive."

"It may not be too long." Dr. Rebecca said. "General Nord has been aware of our location all morning, since we arrived at the deli."

When they reached the next blockade, Dr. Evan pulled to the opposite side from the exit ramp to not block traffic.

An officer walked up to him. "Identification please?"

Dr. Evan handed him his identification badge.

"Okay sir. The convoy to assist you, and your team, has arrived. Please wait about five minutes before you proceed. They need to be set up in case the bridge collapses."

"Officer, is it bad?"

"Not sure. Bridge inspectors are beginning checks of all the bridges. There are only a few inspectors, hundreds of bridges, and not enough officers to block them all. It takes time. There are a lot of bridges down, or of questionable stability. As far as we know, no one has been across this bridge since shortly before the event."

"Okay. Thanks. Have a good day officer. Hope your work gets easier."

The officer smiled. "I'd rather be here than in the city right now. Most places have power, though not all of them."

Dr. Evan shifted the vehicle into park. "We didn't have power where we were this morning."

"At least you will have power at the base. Have a safe trip." The officer stepped back, waved, and turned to direct the incoming traffic.

The number of cars on the road surprised her. Some were emergency workers, trying to reach family, or jobs. Albuquerque was the largest city in the area, and probably hadn't slept in over a hundred years. Vehicles were its lifeblood, racing along the arteries that gave the town its name and purpose.

She tried to imagine what the landscape would look like if the Rio Grande spilt. East and west would crumble further apart. Transportation between the two would be nearly nonexistent. Families split down the middle, and unable to cross the river to each other until Mother Nature decided to rest, and humans could rebuild bridges between new locations.

"We could wait at the bridge. I won't argue with the officer. We'll wait a few minutes, then go on and hope no one follows us." Dr. Evan said.

After a few minutes, the officer who had spoken with them went to his car and started it.

Dr. Evan started up the transport vehicle.

The police car drove out of the way and let them through.

The traffic ignored them. Of course, they were in an official military vehicle, so not many would question them being allowed through the barricade. If they had been in any other vehicle, all the other travelers would try to force their way through as well.

It wasn't far now. The map showed two curves before they reached the bridge. Of course, not every nuance of the road is visible on a paper map. Those curves could prove the most dangerous in a situation like this. After all, the driver wouldn't be able to see a sudden change on the other side.

Dr. Evan slowed as he approached the first curve on her map. He rounded the corner. The interstate was clear.

Amber's stomach churned the closer they crept.

At the second curve, Dr. Evan slowed down and took the center of the road. "Let's all be quiet as we pass over the next major road. We don't want people to notice us, and try to exit onto this road."

Cars moved on the major thoroughfare below. Police vehicles sat at each entrance and exit ramp to the interstate they were on. No turning back now.

Minutes later, the bridge spanned in front of them.

Dr. Evan stopped the vehicle.

Amber followed behind the others to survey the bridge.

A mile-long bridge crossed two canals and two sections of the Rio Grande. It appeared stable enough. There were some signs that things might not be quite right with it though. It tilted at an unnatural angle.

"Each of you, grab your bag and walk across, one at a time. We'll walk much of this next mile. Sorry for the inconvenience," Dr. Rebecca said.

Livia groaned.

Corbo reassured her.

"Guess the equipment has to stay in the vehicle. Can't lug it that far," Tom said.

Amber shouldered her backpack and stepped up to the bridge.

Brandon grabbed her arm, "No, not you first."

"I am the lightest. If I can make it, all of you can."

"We have no idea how deep, or swift that canal is," Brandon said.

"Dr. Evan, how deep is it?" Amber asked.

"Often deeper than the river through here. I think it is best if you test it out. Tie the rope around your waist first though."

Amber's mom nodded. "Be careful. Remember how to climb a ravine."

Tom walked up with the rope and tied it around her waist.

Her mom and Brandon hugged her.

Amber settled her backpack, took a deep breath, and began the walk. It was about ten car lengths to the other side of the first section of bridge. She focused on some scrubby trees on the right side of the road. As she walked, the bridge seemed to shift, or maybe it was a slight breeze. The asphalt was heating up, and it burned through her shoes. There was no sulfur smell. At last, she reached the other side, turned around, smiled, and waved.

At this point, the bridge was supported by a short stretch of land underneath. Then, another section of bridge. There was only a few more feet of rope, so they'd all have to make it to here, and then go on.

"Okay?" Dr. Evan mouthed.

Amber nodded, and untied the rope.

Tom pulled it back and prepared for the next person to cross.

The full bridge was over a mile long. Section one crossed a canal, and rested over land. If the bridge broke here, she could land safely on the ground, if stranded between bodies of water. She walked on to the next section marker to wait for everyone to cross.

Her mom came next.

As good a time as any to talk to her mom while they waited. "Mom, I'm worried."

Her mom hugged her. "I know you are dear. We all are."

Amber glanced back as Alex began the walk across the bridge.

"Before the power went out, I tried to print some maps. Dr. Rebecca's right."

Alex reached them and untied the rope.

"Alex saw it. I'm afraid the Rio Grande will split all the way up to Yellowstone."

"Are you sure you ran the simulation correctly?" Amber's mom asked.

Amber nodded.

"I saw it. It's not good. If we could have time to duplicate and prepare the report," Alex said.

Dr. Rebecca arrived.

"No one will believe you without it." Amber's mom glanced at Dr. Rebecca.

"We've got to try," Amber said.

"We will. Write down the sites and search order you used. Give me and Dr. Rebecca a copy. We can't bring it up at today's meeting until we run those reports."

Amber nodded.

At last, the whole group, except Dr. Evan had walked across.

He was on the phone. He closed his phone and waved them to continue.

"Okay, we will go on, and Dr. Evan will catch up. Drink some water, and we will walk two at a time," Dr. Rebecca said. "Stay one bridge section behind the pair in front of you."

Alex took Amber's hand, and they walked silently together. He tapped the bridge gently with his collection pole. Sound shouldn't bring the bridge down. They weren't taking any chances.

They reached the edge of where the bridge joined the river. Amber wanted to peek over and examine the sides and river below. Safety though, was in the middle of the bridge. She held up her hand to stop those behind.

Alex nodded and tied the rope around her waist again.

She edged toward the right side, so she could peer over the rail of the bridge to the river.

The water appeared to be flowing faster than the previous day. She had no way to measure it now, nor had she then. The water was muddy and full of swirling broken bits of construction, plant, and animal debris. She walked back to Alex. He untied the rope, and they walked onward.

As they reached the island in the middle of the river, she took two steps to the right side. The river flowed quite different from the day before. Instead of thin and muddy knee-deep water, it had

changed. It swirled higher, lapping the bridge supports. She pointed toward it.

Alex followed her.

The pairs behind stopped and waited.

Some log debris, and a large cow carcass, had washed up against the eastern bridge supports, damming the eastern stream of the river. Water pooled upwards, and backed into the main channel. This section was filling up with water, and could become a problem if the western side clogged and dammed as well. She clenched her teeth.

The military vehicles were in sight now.

Alex let out a low whistle, and motioned the groups behind onward.

Amber and Alex strolled across the ponding river. A long bridge stretched ahead of them, then another canal.

As they reached the last canal, Alex grabbed her hand, and she took a deep breath. They hurried as fast as they could, trying to prevent vibrations that could cause danger to the people behind them, and the structure of the bridge. At last, they reached the other side where the military vehicles waited on them.

Amber waved off the men who came toward her. A drink of water was all she needed. As soon as she caught her breath, she stepped toward the edge of the road and peered at the canal. The asphalt had slid across itself, causing a small hill in the pavement on the corner at this end.

An officer walked up to her. "It's a good thing you all decided to walk. We aren't sure if it is safe to drive across. The engineers haven't made it here."

Amber and Alex hurried into the shade beside the convoy of vehicles until the rest of their team reached safety.

Amber's mom and Brandon arrived. Both were exhausted and needed water. Corbo and Livia came next. Tom and Dr. Rebecca came last. They all stood, watched, and waited for Dr. Evan try to drive across.

At first, it seemed nothing was happening. The officer next to Amber was on the phone with Dr. Evan. "Go a little faster. Too slow might be worse on the bridge than too fast." He waited a moment. "Twenty miles an hour sounds good."

The van picked up speed. He was across the first canal. The first long span held.

Amber couldn't decide if the swaying was real, or a trick of the heat wafting off the pavement.

Dr. Evan reached the first river section.

The military vehicles moved off the road.

Dr. Evan centered the vehicle on the bridge.

He crept across the second part of the river. He didn't pause at the thin strip of land between river and canal. A loud crack echoed as he crossed the second canal.

Amber took a deep breath as Dr. Evan stopped right beside the team.

She and Alex rushed to the edge of the safe part of the road. The road remained visibly intact.

"It was the dam," an officer with binoculars said. "Look." He handed them to Amber.

She took them. The debris dam had burst loose on the second leg of the river. "Will it make those supports weaker?"

"No one can cross this road for now. We have problems like this from here south. Our state effectively has the western third cut off from the eastern two-thirds. Won't last long though. If the river slows back down to its normal speed, bridge repairs can be made, and life can return to normal, in a few weeks."

Amber handed the binoculars back. As she entered the vehicle, she wasn't so sure life would return to normal soon.

Dr. Evan wiped his brow as they all settled back into their seats. "I don't want to do that again." He drove down the road toward the base.

The military escort followed.

Chapter 19

Drive to Kirtland AFB, New Mexico

Alex settled into the seat beside Amber. As long as there weren't any more bridges to cross, there shouldn't be any problems reaching the base.

Amber worked on scribbling her notes as the vehicle bounced along. Seat springs obviously worn out. The notebook slid across her lap again.

Dr. Evans swerved to avoid potholes and rocks in the road.

Alex leaned back. "Dr. Rebecca, do Corbo and Livia have clearance to be at the meeting?"

"Yes, Alex. I've managed to authorize them. And no, the soldiers won't say a word to him, since he's my assistant. As long as there is no trouble from Livia's friends."

"I haven't heard from them," Livia said.

The crowded streets from yesterday were far from deserted. Pedestrians and pieces of buildings crowded where vehicles had honked and blared the day before.

A line of military vehicles waited to depart the Kirtland AFB gate.

Full identification would be required of everyone entering. The guard glanced at Dr. Evan and Dr. Rebecca's identification. He counted heads, checked a clipboard, and waved them on.

Alex checked his watch. Not knowing the exact time of the meeting made him nervous. How could they know if they were early, late, or on time?

Dr. Evan parked the vehicle in front of the same building as the day before. Their escort had driven on around them, and disappeared amid multiple look-a-like vehicles.

"Guess we will wait out here?" Livia said.

"We can walk back to the guardhouse." Corbo took her hand.

Alex helped unload the equipment and supplies out of the transport vehicle. Laptops and a box of papers were all Dr. Rebecca had managed to fit into the vehicle.

General Nord approached as he and Dr. Evan finished stacking equipment on the curb. "I'll need the keys. The vehicle is needed elsewhere. You will meet with the mining committee in a few

minutes. Once we have some more reports, we will be in to join the meeting."

Dr. Evan handed him the keys. He picked up the box of reports. "Guess we are stuck here for a bit. Sorry if you had plans."

"Not really," Alex said. "If they want us to do our job, they'll have to provide transportation."

Dr. Evan laughed. He raced to catch the open door.

Amber leaned against a car with Dr. Rebecca beside her. A smile temporarily hid the worry lines forming on her brow. If only there were some way he could erase those worries. Maybe Dr. Rebecca could prove their research wrong.

Dr. Rebecca chatted with some of her students who handed her a box of papers.

Alex walked over carrying the laptops for Dr. Rebecca.

Amber picked up a smaller box and followed behind them. "More notes on disk. Plus, the latest on paper, lots of notes. I don't think they were looking for what we found though."

Dr. Rebecca closed the car door. "Okay, let's go in and meet with Mr. Spike, and his associates."

The chattering students rushed on ahead to hold the door open.

Dr. Rebecca waited until they were out of earshot. "No mention of what you found Amber. Sorry. There isn't time now to duplicate your results. We'll do it tonight, I promise."

As they neared the door she said, "After you put your stuff down, go take a quick break. We need everyone refreshed and ready to listen and share. See if you can find some coffee."

A woman in uniform came up beside her. "I can see to that. Is there anything I can help you carry?"

"I think we have everything. Coffee and a snack would be nice though."

"I'll call for a vegetable and nut tray after I show your group where the restrooms are."

Alex followed them into the building.

Amber was right beside him, which encouraged him. His arms were full, so he smiled at her.

She smiled back.

Her opinion mattered. Shy at times, and outgoing at others. Amber reminded him of someone. A person he knew well, and

missed. Trying to pinpoint who it could be, he entered the conference room.

The people at the other end of the room stared at them as they entered. One walked up to speak with Dr. Rebecca.

Alex placed the laptop cases near the screen and followed the woman who had offered to show them the way to the restrooms.

Once he was back, Dr. Rebecca nodded at him, and left the room herself.

The laptops booted up while he reviewed the stack of papers. For now, they'd have to focus on materials and data they did have.

The last event had caused multiple minor events. The Magdalena Peak caldera showed a greater deformation than yesterday before the power shut off. It didn't look good. He pulled out a sheet on the Aden lava flows. There were signs of activity there as well. A couple of new fumaroles had developed in several regions along the Rio Grande. His hands shook as he placed the paper on top of the stack.

Dr. Rebecca walked into the room and spoke to the small group clustered on the other side of the projector screen. "I apologize. Our satellite research station lost power. My university students brought the latest data, and I haven't had a chance to review it. I will need a few moments." She sat down, grabbed the box, and pawed through the pages.

The men and women Alex didn't know ignored him, and continued talking. At least he recognized the students from their last visit, although he didn't remember their names.

Dr. Rebecca skimmed her notes, and clicked though the information on the disks her students had brought.

Alex tried to make sense of the scenes as they appeared on the overhead projector.

"Okay, Mr. Spike, I think we are ready. General Nord said to go ahead, and record the meeting," Dr. Rebecca said.

The group of three men and two women walked forward and took empty seats at the end of the table.

"First," Dr. Rebecca said, "Let me ask you, have you seen any anomalies in your mining operations?"

They looked at each other, then at Mr. Spike.

"Yes, we have noticed a few small changes. The sulfur and GPS readings are changing. We have to evaluate daily, sometimes

hourly, to determine if we should proceed with drilling. In a few places we have chosen to wait, and moved on to areas which are more stable," Mr. Spike said.

Dr. Rebecca nodded. "Okay. Here is what we have."

A picture of the Magdalena formation from several weeks ago appeared on the screen. "Here is how the Magdalena formation has looked throughout recorded history."

Dr. Rebecca uncovered the second picture. "Here is the way it looked a few hours ago, before my students left the university."

A few people gasped.

The picture was a grainy composite satellite and GPS reading. The formation had changed from almost horizontal, to a vertical plane. It had developed a bulb at the bottom, with a plug at the top.

Alex hid a gasp. It was rare to witness a sudden change in a volcano. If one volcano along the line was showing changes, what about less, or unmonitored ones?

Mr. Spike showed no sign of emotion. "This doesn't affect us. We don't have any current active mines in this particular area. While the deformation is visible, we will not mine that area until it stabilizes."

If Mr. Spike knew what this meant to himself, the local community, and the world, he wouldn't be so arrogant. Alex wanted to prepare a response to interrupt Dr. Rebecca and explain it to him.

Dr. Rebecca closed her eyes and adjusted the pictures again. "Magdalena is only one advanced deformation. Based on evidence I will show you in a few minutes, Mr. Spike we need you to help us set up more COSPECS. At least one placed in every mine within the radius of the activity."

Mr. Spike sat back in his chair and crossed his arms.

She held up her hand. "I know it sounds like a lot. We need to measure air quality and safety, as well as monitor outside the mines for GPS location changes as the ground shifts."

Mr. Spike glared at Dr. Rebecca.

The rest of the room listened closely.

Dr. Rebecca switched the screen. "The ground has shifted all over this part of the state. The rift valley has opened at least two inches at this northern spot."

She stopped to point to it. "And three inches eastward at the southern end. We have multiple events going on here."

Dr. Rebecca faced the room of people. "Earthquakes may be causing the volcanoes to prepare to erupt. The growing volcanoes may be causing the earthquakes. Or, they may be feeding off each other. Only time will tell. However, we must keep our communities safe, and be prepared for a dangerous quake, or eruption. There is potential for a devastating series, or combination, of both quakes and eruptions all along the Rio Grande."

Mr. Spike crossed arms, leaned forward. "Mining is one of the major industries of this state. You don't expect us to stop mining because the ground shifts almost imperceptibly. Earthquakes happen nearly daily here. I don't see anything unusual about this bunch."

Dr. Rebecca placed her hands on the table and glared right at Mr. Spike. "The number is unusual. The magnitude is unusual. The swarms are unusual. The ground has moved more in the last week, than in the last thousand years. We must pay attention to it, and prepare."

He leaned back, arms still crossed. "So, we need to be careful in that one area. Big deal. We can focus on our other mines for a while. The miners in the affected areas are complaining they want a vacation anyway."

Dr. Rebecca turned back to the screen. "The magnitude of this series of events is enormous. No longer are the majority of events located in and around the town of Socorro, as in the recent past."

The map now changed to show about one third of the state of New Mexico.

"They are located here." She pointed to a spot in the San Mateo Mountains, southwest of Socorro. Active mines dotted the range.

"There have been three here, and here." She pointed to places between the Twins Sisters Peaks and Schoolhouse Mountain peak, to the southwest.

She scrolled the map down. "There have even been two here, and here, in the East and West Portillo Mountains southwest of Las Cruces. Each of these areas is an ancient lava flow region. Fumaroles are developing, where none existed a month ago. We even saw one on our trip here, between sections of the interstate."

Mr. Spike shifted in his seat. "They should release the pressure."

Dr. Rebecca turned to face him. "That is one theory. However, we also know that they rarely develop unless there is a great deal of pressure. The one between the two closed sections of interstate could become a volcano, and rise to the sky, lifting the interstate and commuters along with it."

Dr. Rebecca flipped the screen again to Paricutin. "The process of mountain building is believed to be millennia long. However, a volcano can develop, and erupt in a short time, even from a human's viewpoint. The Paricutin volcano in 1943, grew thirty feet overnight, and another one hundred and twenty feet the next day. It erupted as the sun went down on its second day of existence."

Alex's parents had visited there and met the people it happened to, even if it was decades afterwards. His heart fluttered. This whole event was too real, and too close to home.

"Dr. Rebecca," Mr. Spike sneered. "I appreciate your concern. What may, or may not happen doesn't matter. Why should we interrupt our lives when quake predictions are rarely accurate? This movement may take generations. We should drill faster, and release the pressure, if anything."

Alex shifted in his own chair, his heart beating faster as Dr. Rebecca spoke. Mr. Spike's arrogance would kill him, and his miners. Most likely the miners, Mr. Spike probably didn't go the mines. Paricutin may have erupted before he, or his parents, and maybe even Mr. Spike were born. It was relevant to the current state.

Other people shifted nervously in their chairs.

Dr. Rebecca changed the scene on the projector. An excavated ancient house, lava depth forever recorded on the walls.

"Do you remember Pompeii? They had less warning than we do now. If one of these volcanoes decides to climb for the sky, it may take hours, not years. The earth is unstable right now, more than in recorded history. It's not like in the "Ring of Fire." We don't have anything to compare it to."

She waited for the pictures to sink in.

"Do you see this line on these houses? This is where the volcanic ash filled up to in a matter of minutes. Those not in the

harbor didn't stand a chance. New Mexico has been given warning."

General Nord entered the room. "The state infrastructure must keep going. Creating a panic by forcing people to leave jobs and homes with no income would be a disaster."

He walked up and stood behind Mr. Spike. "Yes, we have been listening to your presentation in the next room. While both you and Mr. Spike have valid points, there is no easy answer. Even a few hours' shutdown of the state would have serious financial and morale consequences."

"Yes sir," Dr. Rebecca said. "I am aware that there will be consequences. However, I do believe the people should be given the opportunity to decide for themselves. Their lives, and the future of the state, may depend on it."

General Nord rocked back on his heels. "We have a more immediate concern."

General Nord studied the map on the wall. "The president wants to come and meet with you. He is listening in as we speak. He needs to ask questions, and see what we are seeing."

Pandemonium broke out as everyone talked.

"Not safe."

"No, too dangerous."

"He needs to stay where he is for his safety," one of the mining officials said.

So they believe us, they simply don't want to act on it. Alex clenched his fists. These mine leaders would risk the lives of others without understanding that those people's lives were important. Dr. Rebecca was right, they'd never hear, or understand, Amber's research.

Dr. Rebecca held her hand up, and the room became quiet. "If he is listening to this meeting, then I hope he has heard what all the experts say. As much as we need his advice, he has a job to do. We have no idea if the Valles Caldera supervolcano, the Magdalena Mountains, Jornada del Muerto, or this new fledgling volcano may erupt. Volcanoes may be developing in many more places as well. I do not see a safe place in the state for him to visit."

General Nord nodded and tapped on his phone.

His associates entered the room and took seats.

"Share the rest of your presentation," General Nord sat in front of the projector screen.

She nodded, and returned to her presentation.

Alex ignored her next words. He knew what was going on. Observing developing volcanoes was a once in a lifetime opportunity. One he may never have again.

He looked over at Amber and reached for her hand. He didn't want the volcano to grow if it would destroy him, or especially her. Until his mom died, volcanoes had been a friend, something he thought he knew well. The last year, they would be his future, his feelings to them little changed. Pompeii's picture struck deep inside. He shuddered.

"What is it?" Amber whispered.

Alex turned to her, and took both her hands. "I want you to go and stay safe."

She laughed aloud, interrupting Dr. Rebecca. "I'm not going anywhere. This is my chance too. These fault lines are going to be exciting to explore as they develop. And maybe together, we can answer some serious questions."

The entire room stared at Alex and Amber. "I think you need to be away from the action. If it isn't safe for the president, it isn't safe for you," Alex said.

She took her hands away. "How do we know the events here won't cause more events elsewhere? Perhaps even in California, Yellowstone, or even on the entire planet. There may be no safe place. I'd rather be with my family, and doing what I enjoy as the continent shifts to a new location."

People clapped.

Alex's heart beat faster than he remembered it ever doing before. She had slipped it in for those who would hear and question. Not that he had intended the whole room to hear what he said to her.

"Amber," Dr. Rebecca said, "What you said is important to remember. That quake which slid the southern part of the fault three inches, caused waves and flooding in several areas along the Gulf of Mexico."

Dr. Rebecca switched the picture on the projector to an island, with lapping waves. "If these quakes continue, it is possible the consequences could be far reaching. For example, Tuvalu, an

island nation, is almost entirely underwater now, continuing to suffer even more loss of land. If the natives of this nation want to stay in their ancestral land, they will have to build a floating island of houseboats anchored to their previous habitations."

Nervous laughter resounded. It all seemed so unreal. Crying wasn't an option for either the Tuvalu islanders, or the people here.

"We have to be prepared for continental flooding due to dam collapse, or clogged rivers, if more movement occurs. Some river bends could shift drastically. As water searches for new paths to follow, farms and coastal towns will be inundated."

Dr. Rebecca looked directly into the camera. "Mr. President. In my opinion, neither the east coast, nor the west coast is safe for the leader of the country in the event of further massive movement. The south coast is not safe either, as the Gulf of Mexico sloshes into a new position."

The picture on the screen changed. "With Yellowstone northwest of us, I would recommend, with the assistance of your military advisors, you find a safe place for you, and your family, in the event of a catastrophe. Predicting the next event location and timeframe is an unlikely task."

Alex took Amber's hand and squeezed it. He wanted her safe. He also wanted his dad safe. He glanced across at Tom.

Tom bit his lip and stared at the wall.

The meeting went on without Alex. Somehow the people had to know the truth. Livia wasn't too far from the truth, though her version twisted in a different direction without his and Amber's scientific knowledge.

Chapter 20

Kirtland AFB, New Mexico

Except for the students, the majority of the participants were old enough to be Alex's parents. If they argued with Dr. Rebecca, they sure wouldn't listen to a college student and an almost high school grad, not matter how much experience they had.

Mr. Spike, red faced yelled something Alex didn't quite catch at Dr. Rebecca.

Amber squeezed his hand.

"Okay," Dr. Rebecca said, "I think we all need about a fifteen-minute break to think. Then we will come back, and decide what to do."

Alex and Amber walked out of the room together.

Tom caught up with them.

Amber squeezed his hand, let go, and walked on down the hall.

"Alex you've only known Amber a few days. You seem to like her more than Shelly." Tom grinned.

Alex watched Amber walk. Her stride, though confidant, betrayed her fear and confusion. She glanced back one last time and feigned a smile. "Shelly, was Shelly. She liked me more than I liked her. Amber is different, more of a friend I want to be around all the time. Must be the mutual volcano and earthquake interests." He smiled at Tom. It could be that, and something else, he couldn't quite place.

"Sure thing." Tom laughed. He pulled out his phone and his voice deepened. "I think it's time for me to return home and convince my mom, and your dad, to go somewhere safe."

Alex sighed. "I know. I wish I knew the safest place in the country for them. They won't want to leave Hawaii, you know."

Tom nodded. "Anywhere has to be safer than Hawaii if a tidal wave hits. I've seen videos of islands washed clean away."

"Hawaii is big enough. It would survive."

"Not now it wouldn't," Tom said. "Generations ago, natives built their homes out of renewable resources. Those trees, grasses, and other materials wouldn't destroy the environment if knocked down in a hurricane or tsunami. Homes could quickly and easily be

replaced by the community. If all those concrete buildings were knocked down, the mess has nowhere to go. The metal and concrete would rip out far more vegetation, and kill more people than waves alone."

Alex groaned at the image of buildings floating across the island, next to grass huts.

"Tidal waves would cause those concrete blocks to rip out trees, infrastructure, and much of it would end up on the ocean floor. All of the debris from destroyed buildings will destroy more than hopes and dreams. They will demolish an already fragile ecosystem." Tom scrolled through the names on his phone.

Hawaii, and everywhere disasters struck, it was the same. Giant landfills had to take all the debris, as it couldn't be easily recycled into new things. Littering the ocean floor could kill coral reefs and creatures that depended on the ocean floor for survival.

At a large initial cost for marine life, concrete gardens and broken ships, had created artificial reefs, and homes for coral and fish. Artificial reefs changed the depth, current flow, and temperature of the water. Many now wondered if they were a greater damage to the environment than a hope of building homes for oceanic wildlife.

Shoulders hunched, Alex walked back to the conference room. Tom was right. Humans had made some devastating blunders. He hoped they could be fixed. Now, his mind focused on trying to figure out how to undo the damage. If only steel could be turned back into minerals, and plastics back to oil, and whatever else was in them.

Amber slipped her hand in his as they reached the door.

"Thanks Alex, for believing in me, and caring."

"Your mom and Brandon care about you too."

"Yes, mom and Brandon care about me. It isn't the same. I thought I would miss having Karen, my best friend at home. While I do miss her, I've enjoyed talking with you. You remind me of her in some ways, a good friend."

Alex smiled. At least she agreed with his feelings. "Tom is going home to Hawaii, to try to convince my dad, and his mom to leave."

She nodded. "Good idea. They may not want to come. The changes here are already affecting volcanic composition there, you said."

"I know. I don't expect them to leave. He has to try, for both of us."

Corbo stood at the door, waiting on them. "Livia and I decided to join you. Tom, I heard you talking. Sorry to listen in. You will be missed."

"I hope to be back soon. Or, maybe I'll stay in a safe place with my mom and Alex's dad."

Alex walked into the room with Amber at his side.

Dr. Rebecca tapped the table. "Are we ready to reconvene?"

Alex hurried to his seat. Tom going home alone would leave him alone, with no one he had known since early childhood. At least he would have Amber to talk to.

Corbo and Livia weren't all that bad either. They hadn't said much since the visit at her family's deli. Maybe there was some way the team could convince the leaders to do something. What that something was, remained to be discovered.

Dr. Rebecca stood in front of the projected New Mexico map. "General Nord, do you have anything to say?"

General Nord walked to the front of the room, and studied the map. He used his finger to draw the horseshoe shapes of the fault lines, and the new volcanic activity. He turned to the group of people.

"The president is concerned for the safety of everyone in this room, this state, the country, and the world at large. He has heard Dr. Rebecca's pleas for his safety. What do you think will happen?"

Dr. Rebecca glanced at Amber and Alex. "It depends on the continuation, and magnitude of events. A strong enough quake, even here in the heartland, could move the continent enough to form tsunamis. Especially, if several large magnitude quakes occur at the same time, along with an eruption of a supervolcano, such as Valle's Caldera next door to Los Alamos." She steered the conversation to a serious matter. Maybe she had overheard him and Tom talking in the hallway.

The color drained out of General Nord's face. "Dr. Rebecca, how much warning of a tsunami would the president have after a catastrophic event do you think?"

Alex hoped Mr. Spike was listening.

Mr. Spike shifted in his chair, looked away, and smirked. "Yeah right."

Dr. Rebecca glanced at Mr. Spike, and closed her eyes. "Claire, you would have the best information on tsunami destruction and warning times."

Amber's mom walked to the screen. "Planet map, please."

Dr. Rebecca switched the picture.

Amber's mom took the pointer and stood beside the map. "Many factors go into determining warning time. First would be the president's location. Second, would be the location of the event which caused the tsunami. Third, would be the ricochet reaction that sometimes occurs. Fourth, and most important, would be if the tsunami goes through any of the zones where there is equipment stationed to detect them."

She pointed to the west coast. "The majority of sensors are deployed in the Pacific. Depending on the circumstances, there might be less than fifteen minutes of warning time. Unless a major catastrophic slip on western fault occurs, we shouldn't have to worry about tsunamis there. However, even California, Washington State, and Alaska are reporting increased activity. I hope to contact our representatives there later today for an update."

Amber's mom pointed to the capitol. "On the east coast, there are fewer sensor zones, as fewer destructive tsunamis, occur in this area. They don't develop enough steam to be as damaging, and are generally only higher than average high tides here. The events we are seeing now could negate that protective effect. If the lower half of the country slides far enough northeast, tsunamis could occur, though most likely pointed across the ocean."

Alex nodded. Unless, of course, the tsunamis set off events across the globe.

She faced the crowd. "What we are seeing is unprecedented. If the events here set off a worldwide chain reaction, those volcanoes on the Mid Atlantic Ridge will be squeezed, and are difficult to monitor. Those in the Mediterranean, Alex will better be able to explain the reactions of the volcanoes." Amber's mom smiled at him.

Alex awkwardly stood up. His dad could better explain things. After all, his dad had been to some of these volcanoes.

He took the pointer from Amber's mom. Mouth dry, he turned to the crowd. "General Nord, the Atlantic Ridge volcanoes might be the most dangerous. In fact, they might be showing signs of

change, even now. We do not know how the ocean plates adjusted to the three-inch location change of the Rio Grande Fault. Many are so deep their monitoring equipment isn't always picked up by satellite. While this would be the time to explore if we could, to find out what is changing; there would be no way for scientists to quickly, and safely, return if something went wrong."

Volcanoes might be changing everywhere. At this rate, submerged volcanoes could rise from the sea millennia before expected, perhaps, even Loihi. Alex's pointer, and voice, shook as he pointed to the lines of Mediterranean volcanoes. "If the Atlantic Ridge erupts violently, it could send tsunamis east and west, disturbing the magma flow, and potentially causing Valles, and other volcanoes to erupt even more."

Alex turned to Dr. Rebecca. "Did your students bring any recent data from the Mid Atlantic Ridge?"

Dr. Rebecca in turn looked to the back of the room at her students.

One of her students shuffled some papers. "Sorry, we barely had time to organize local info. If we had known you didn't have power or cell service sooner, one of us could have worked on it."

"It's okay," Dr. Rebecca said. "What you brought is a start."

She walked up to the map and took the pointer. "General Nord, we may have to stay here if the power doesn’t come back on. We need constant access to worldwide information about these serious events. All stats from the last few weeks need to be condensed. We don't have months to go over them, we need them now."

He nodded. One of the uniformed women came up and whispered to him. A few words from him, and she left the room.

Alex sat back down. Relief flooded through him, glad that he was no longer in the spotlight.

"What do you recommend for the mining commission?" General Nord said.

Voices rambled nosily.

Mr. Spike argued that the miners and community were perfectly safe. A few extra quakes meant nothing in the long term.

Dr. Evan and Dr. Rebecca's concerns and fears about tectonic stability couldn't quell his arguments. A few others listening, did take notes.

It seemed a re-hash to Alex. It was time to do something. Anything. Not sit around and talk.

Tom pointed to his phone and motioned to the door. They both slipped out.

Alex tried to close the door.

Amber pushed it back open to let her through as well.

The door clicked closed.

"Alex, you call your dad. Ask him to book me a flight home. He will want to hear your voice. I'll leave mom a message. She'll be in class."

Alex nodded and pulled his phone out.

Amber took her own phone out and walked down the hall. Her voice was low and melodic. She must have called her friend Karen. He wanted to listen to the conversation to be sure it wasn't an unmentioned boyfriend. He had to return to the meeting soon, so he sighed and dialed his dad.

Alex's dad wanted him to come home. After all, there was major concern for his safety here. Alex wanted to be here. The knowledge he would gain from the developing volcanoes would make a valuable contribution to science.

Another reason he wanted to stay was Amber. She needed a friend right now. He couldn't abandon her to work alone if Tom left as well.

After the conversation with his dad, he walked over to her.

"Amber, you okay?" Alex asked.

She leaned sideways against the wall and nodded in answer. "Worried about Karen. She isn't telling me something. I miss our closeness. In twelve years, we've never gone this long without talking. Not even in the remote jungles of South America."

Alex walked up to her and gave her a hug. "It'll be okay. She will tell you soon. Maybe she will come out here to be with you?"

Amber shook her head and looked up at him. "No. She won't leave Jerry. I knew it would happen someday. This isn't the kind of life she wants."

A tear glistened in her eyes. Amber shook her head. "She has the knowledge. Karen won't travel, and defiantly not without Jerry. She wants to be 'normal.' I know it's her choice."

Alex kissed the top of her head.

She looked up in surprise.

He took her hand, and led her down the hall. He had to follow his heart, like Karen with Jerry.

Chapter 21

Kirtland AFB, New Mexico

Amber leaned against the wall. Karen should have been here, not home with Jerry. During the call, Jerry's voice echoed in the background; along with others talking excitedly. Brandon hadn't mentioned any calls from her in a day or two. Karen had never kept secrets from her before. Something was different, and there was no way to find out what from here.

Alex walked over and hugged her.

Her stomach tingled. Was this how Karen felt with Jerry? She looked up.

Alex gazed down at her. He gave her a quick kiss on the top of her head.

She wanted to pull away; and didn't want to, at the same time.

As he pulled away and took her hand, she thought he was going back into the meeting. After all, they needed to be there. When he kept walking, she started to pull back.

The conference room door clicked.

"It's okay," Alex said. "Tom and your mom will let us know what else we need to know. Let's sit outside and wait on them. I'm not sure where we are going tonight, anyway."

Alex held the door open.

She blushed, walked through, and sat down on the step.

Soldiers hurried up and down the road not even glancing their way.

"I'm used to being the strong one. Not bossy, so much as the one Karen looked up to. I won't change for anyone."

Alex let out a small laugh. "I don't want you to. For me, or anyone else. It's nice to open doors for someone once in a while. You can repay the favor someday."

"Only if I have my hands full, please."

"Okay, whatever you say." Alex smiled and gazed into her eyes. "Tell me about your research methods."

Amber laughed. That was easy. Since being a toddler, she had explored little known faults, and learned from her mom. Climbing, digging, and doing the dirty work so her mom could add to the

knowledge base. Occasionally, she and Karen found arrowheads, or pottery shards, and called the local archeology team in to join them.

Of course, if the local kids were exploring the area at the same time, they always made fun of her and Karen. Their taunts hurt, and had pulled Amber deeper within herself, less trusting of others. Karen had fought to reach out to the other kids their age.

Sometimes it had led them both into trouble. Like the time Karen accepted a dare to pound two boards into the ground next to a seismometer. The fury of Brandon and her mom when they found out the recorded activity was faked had never been forgotten.

"I'm surprised Brandon let Karen stay behind," Amber said.

"She's always been at your side?"

"Yeah. Now, she's trying to piece things together from California. Not sure how much she's trying with all the people in the background."

Amber and Alex talked until she lost track of time. Talking to him was almost as easy as talking to Karen. After all, they both enjoyed science. She and Alex didn't have any history together, so there were plenty of stories to tell.

Of course, if Karen wasn't going to join her in the future, she might as well make other friends in, or related to, her field of study. The more she learned about him, the more she liked him.

The door squeaked opened behind her. "Amber, Alex, are you okay?" Amber's mom walked out and sat beside them.

Amber nodded. "Sure. We're talking. We needed a break. And they won't listen to us anyway."

Amber's mom laughed. "If you two wander off alone again, I'll have to call Alex's dad and have a good talk with him."

Alex groaned.

"Tom came back in and said you two needed some air. I thought he was joking." She ruffled Amber's curls. "You're still worried."

Amber nodded. "Alex's presentation didn't help. I'm more scared now. How is the meeting going?"

"It's over. At least for us. General Nord is meeting with the mining heads for a few minutes, then his own staff. We are being sent to the cafeteria. They are finding other, perhaps less attractive, accommodations for us. Hope you brought everything you need.

The trailers will stay in the park where we left them, no way to bring them here with bridges closed."

"I hope we aren't more crowded than last night," Amber said.

"It wasn't that bad, was it?" Her eyes twinkled.

She held out her hand. "Let's go eat. Tom leaves in an hour. Dr. Evan and Brandon leave soon thereafter with some of the mining officials, and Dr. Rebecca's students. After all, they have to set up the COSPECs in the mines and lava fields."

"Mom, you will miss him a lot, won't you?" Amber stared at her shoes.

"Yes dear. Brandon can never fill your father's shoes. However, he is important to me. As Dr. Evan is important to Dr. Rebecca."

Dinner for the group was at first chatty as everyone discussed their plans. By the end, everyone ate silently. In a few short days, they had become a close-knit group who relied on each other, and communicated well.

Corbo and Livia sat off to the side, watching each other.

Corbo likely wanted to be part of the group. Livia, she wasn't so sure of. Amber had been the nerdy odd ball in any group at school. Here, nerdy is normal; and worldly Livia, the outcast. There had to be a way to reach her. Amber watched her close and tried to think of something to say to her. Karen would know what to say. Maybe a phone call later to compare notes, and ask her would work, when no one was listening.

One group of soldiers stopped by the table for Tom. They would drive him to the airport on the way to their own assignment, whatever that was.

Dr. Evan and Brandon prepared to leave with the specialists and mining officials. Mr. Spike didn't say anything around Amber, so she had no idea what General Nord might have said in their later meeting.

Amber's mom and Brandon said their goodbyes.

This time, she watched closely. The tenderness of looks and touches as they parted brought a mist to Amber's eyes.

She wanted to say something to him, and had no idea what. Her throat choked up. Brandon wasn't her dad. He wasn't a replacement dad either. He had taught her almost as much as her mom. Brandon took the time to be sure she understood any new

concept, while her mom thought she already knew how to do everything.

Alex reached out for her hand, and she turned to him. She was glad he wasn't leaving. He was the only friend she had here.

Brandon climbed into the crowded transport vehicle, and waved to them. Amber's mom turned away.

Amber stood beside Alex.

Livia and Corbo waited nearby, a wistful look in both their eyes.

Her mom smiled through her tears, and wiped her eyes. "It'll be okay."

Once the vehicle was gone, she put her arm around Amber's shoulder. "We'll all be together again. Someday."

Amber hugged her close. Somehow, she wasn't so sure.

Chapter 22

Kirtland AFB, New Mexico to a restaurant and then a ranch.

Amber and Alex turned back toward the cafeteria building. The uniformed woman waited to lead them to where the group, now one third smaller, would spend the night.

"Lots to do," Dr. Rebecca said.

Corbo and Livia stood beside the building. On the outside, looking in.

"Corbo, Livia, do you wish you could go home?" Amber asked.

"No," Livia said. "I won't leave Corbo, and he has to stay with Dr. Rebecca."

Corbo took Livia's hand and walked behind their guide, almost passing her.

"They've been too quiet. I hope they're okay." Dr. Rebecca tightened her grip on papers trying to flutter away. "Today has been a shock to them."

The trailer their guide led them to was similar to the one they had left behind. The guide opened the door. "There isn't much sleeping room. A couple of computers have been set up. More accommodations may be made available tomorrow, depending on your plans."

Dr. Rebecca nodded. "That's okay. We are down to six people now. We should be fine. Who knows what Mother Nature has in store for us tonight."

Corbo and Livia went in ahead of Amber and Alex. They walked down the short hallway and went into one of the little rooms.

"Give them a few minutes. They need some time alone. Time to turn on the computers, and search for what updates we can." Dr. Rebecca said.

Amber sighed. For some reason, she didn’t want to work. Before, fieldwork had been exciting, to study things from long ago, and think of how they had affected the present, and potentially the future. Now, she was in the middle of events as they happened, and it wasn't fun. It was scary.

She flipped through the screens. Low murmuring interrupted the data in front of her. The numbers and streams blurred before her eyes. No one else paid any attention, so she slipped out of her seat to follow the sound.

In one small bedroom, Livia leaned up against Corbo, and spoke softly.

Amber walked into the room trying not to disturb them.

"You are almost a brother, since my mom loved your dad."

"Hush, Livia. I was never your brother, and that's not what you, or I, want. That's why we get along so well. Even our parents trusted each other." Corbo hugged her.

"My dad may hate you even more now."

Corbo's lips brushed the top of Livia's head. "If he does, it's his loss."

She looked up to him. "He will see you as his rival for mom." Tears flowed down her cheeks.

His arms squeezed her tight, and he kissed her lips. "Livia, it's okay. We will be fine. If that's what you want. He will see me as a rival for your attention, no one else's. If he does, he has bigger problems than we can fix." He kissed her as she snuggled closer to him.

Amber waited, barely breathing. A side of Corbo unseen before. And Livia showing her vulnerability was unexpected.

Livia pulled back.

"Corbo, do you want to find the woman who raised you, who isn't your mom?"

Corbo looked up at Amber in the doorway. "I'm not sure. We aren't one hundred percent sure of the truth. I guess we have to find them, to find out. No idea where to start though."

"Where are they usually at this time of year? Perhaps we can find them by saying we are looking for you." Amber asked.

Corbo laughed. "That would make them trust you. No. You might have a point though. If we want to find them. I might can find a way. They travel between three or four widow's farms. It seems they preferred to work for women, not men. Somewhere only one or two migrant families lived and worked. Odd, isn't it?"

Amber sat beside Livia. "Yeah, in some ways you would stand out more, while fewer people would know about you."

"I'll find some phone numbers for you." He looked around at the tiny room. "I wish I could stay with Livia all night."

Livia smiled up at him.

Amber coughed. "Well, that might not work too well. We'll see."

"She needs me."

"I know she does. We all need your expertise Corbo."

"What expertise do I have?"

Noisy vehicles rumbled by, shaking the trailer.

Amber shivered. It wasn't a quake, even if it felt like one. "Don't you know? You are good at communicating. You put people at ease. The Mexicans are comfortable around you, even if you speak little Spanish. You know how to travel quietly, and unseen. We will need that. We have to return to the fault lines and study them without alerting the people in the area."

Corbo shuffled his feet. "I don't want to. I don't think looking at the fault lines will help. We must stop this series of events."

"We have to see and read the fault lines to do so." Amber said.

"Why not the volcanoes?" Livia asked.

"Remember the fumarole we examined on the way here? We know what they are doing. There is not enough time to check both. We've seen a few no longer sleepy volcanoes already. Now, we need to check the faults. I have to know if they are doing what I think they are."

"In fact," Alex said behind her in the doorway. "I'm afraid if we don't leave now, we may never be able to. They could detain us. This may be our one chance to discover something important, and there isn't much time. Red tape could keep us from observing the faults, or volcanoes, until the damage is done."

Amber shivered. "Please don't say that. They need to know the truth."

Alex held his hand over his mouth. "General Nord wants the truth. I think he's afraid of it. They want the safety of the community. They don't want us, or anyone else, to scare the public. The people would panic, and where would we tell them to go anyway if what we saw was accurate? Come on, we'll tell your mom and Dr. Rebecca we are going out to town for dinner." He pointed to their backpacks.

Everyone grabbed their bags, and went into the front room. Amber's mom had told stories of exploring alone in places where

women were not respected while in her first years of college. At least she wouldn't be totally alone.

Dr. Rebecca and her mom's faces were drawn and pasty.

"Amber be careful. You know what to look for," her mom said.

Dr. Rebecca looked up from her computer screen. "I have your notes. We'll try to reproduce what you saw, and share the reports tomorrow."

Amber gulped and nodded. Leaving her mom behind on the base wasn't what she wanted to do. "Mom. We're a team."

Amber's mom nodded, and sat a pile of papers down. "And always will be. You need me here to compile your findings like back when you and Karen explored Haywood fault, and Brandon and I stayed at camp."

"We had a few archeologists with us then."

Amber's mom smiled. "Are you saying you can't do it? I think you can. I'd slow you down anyway. Go on."

She gave Amber a gentle push. "I'm not young enough for hiking in a hurry. There isn't much time. You can do it."

Amber hugged her mom close and gulped. To travel and work had been a dream, for the future, far future. "I'll miss you."

Her mom whispered in her ear. "Stay safe. Call when you can." She held up her phone. "I'll be right here. Remember part of our team is in the mines. Brandon's phobia of the dark could have kept him here with me."

Nyctophobia. If Brandon could overcome his fear, she could overcome being truly on her own for the first time. Karen would be proud she remembered the name of the phobia. Amber gulped and followed Alex, Corbo, and Livia out of the trailer without looking back. Pulling her backpack taunt, she trotted down the street.

Alex grabbed her arm. Whispering in her ear he said, "We are young lovers out on a stroll, don't make them suspicious."

She giggled and hid her mouth. It wasn't funny. She had stepped into a future that she wasn't sure she was ready for. Nervous laughter eased her tension enough to focus on the here and now.

Most of the vehicles were long gone, and the base streets deserted. A dog slunk past them, and howled. They strolled along, and chatted about the scenery. Several minutes later, they reached the guarded gate.

The guard glanced at them, and back at his notes as they walked right through. "Be back before dark!"

They nodded and walked down the road.

Out of sight, Corbo pulled them off to the side of the road behind a bush. "Here we hide until dark. Where are we going?"

Amber stiffened. Too much change in one day. Quake trauma and leaving everyone she knew behind. Unseen dangers lay ahead, no matter which path she took. Where could they begin?

Alex pulled her close. "It's okay."

"Brandon and my mom. Leaving them both in one day. Will I ever see them again?" She looked up into his eyes and clutched her backpack. "I've always had them nearby. I hope mom and Dr. Rebecca will be safe."

The earthquakes were becoming too strong and dangerous. She was used to being tough, and didn't want to crack under the pressure and fear for her mom, and the life she had known. She didn't want to cry in front of Alex, unsure if he would view crying as a weakness.

Alex pulled her close. "I hope so. It should all be over soon. I almost wish we could keep moving now. Corbo is right. Night provides some cover of darkness."

Amber leaned against his shoulder. Life changed too fast. She wasn't used to it. There was no time to anticipate, and plan for what would happen next. She had intended to live at home for many years more, until after college and joining her mom and Brandon in research. Now, that future was crumbling away.

Corbo and Livia sat as close together as she and Alex were. She pulled out her map. "We have to return to the place on the river where Dr. Evan had to stop. We need to take the time to evaluate the rift."

"That's about ten miles, maybe more," Corbo said. "Are you up to the walk? It's not like we can ask for a ride. No one knows we are here."

"And there is nothing here for us to drive." Alex said. "We have to keep you safe." He pulled Amber closer to him.

Livia sat up. "Let's walk to a restaurant I know, and have some of my friends meet us there."

Alex groaned.

"They aren't all bad," Livia said.

"Um," Corbo said. "If you say so."

Amber checked in her pockets. She had some change and a crumpled five-dollar bill. It wasn't much. Not enough to feed even her for more than one meal.

"Don't worry," Livia said. "We don't have to eat, and I have a credit card if we need it later."

"So do I. Now let's go. I can hear dogs barking," said Alex.

The evening deepened to dusk.

Livia pointed which way to go.

Corbo directed them through holes in the underbrush they would never have seen.

Barking dogs and shouting men crept closer.

They reached the road, crossed it, and entered a small restaurant. No customers were visible.

Livia whispered to the woman at the counter.

The woman rubbed the table with her cloth and whispered back.

Livia led the way through a door by the restrooms. She put her finger to her mouth. "A buzzer will sound if the front door opens. Maria won't say a word. Come on."

Livia dashed through the kitchen cook area to a pile of boxes. Reaching behind the boxes, which claimed to be eighty-pound boxes of dishes, she pushed until the boxes swung away from the wall on a platform. She flipped a light switch and hurried down a small flight of stairs. A tiny bulb let out a candle's worth of light.

Amber and Alex followed.

Corbo closed the door. The stairs creaked under his weight.

At the bottom, there was enough room for six people to crouch in hiding. Four people could sit almost comfortably.

Livia breathed deeply. "If no one comes, we will leave soon. Amber, what will we need to look for?"

Amber tried to describe how folds in the rock signified where quakes had occurred in the past. She closed her eyes, and tried to concentrate on how to explain it. It was something she had always known. Trying to teach someone who didn't know was a challenge.

She opened her eyes to the grained wood paneled walls. The wood grain would explain the basics to Livia. Hopefully it would give her and Livia something to talk about, and maybe encourage Livia to help Dr. Rebecca in the future.

Alex might not even know as much as he needed to know, since his studies had been mostly volcanoes.

Amber traced the wood grain with her fingers, and tried to explain how different types of swirls meant different aspects of a geological past.

"Not sure I'm understanding it," Livia said. "Maybe I'll recognize it better in the rocks."

"Makes more sense that way, than when Dr. Rebecca tried to explain it to me." Corbo turned to Livia. "How do you know of this place?"

Livia let out a tiny tinkle of a laugh. "My friends and I use it to hide people moving in and out of the country. There are many of these places. Never thought I'd be in one. Oh well. Now we wait."

"Will General Nord look for us?" Amber said.

"They will forget us for now, as long as we don't stir up the communities." Alex said with a look at Livia. "After all, he has to keep the population from panicking, and fix the broken bridges. Dr. Rebecca and your mom won't say anything. We sure played the part of couples well enough."

"Aren't we?" Corbo asked.

"Of course," Livia said. "I'm not sure about Alex and Amber though," she laughed.

Amber gripped her backpack strap. "We've barely met. I, um, never had a boyfriend before. That was Karen." The heat rose in throat, as the memories of late nights spent with Karen and Jerry flooded back. Many of those nights, when her mom and Brandon worked late, Amber and Karen weren't always alone at home.

Alex pulled her close, and she turned her head to his chest.

Footsteps resonated overhead. Something shuffled, and the door opened. "Livia, it's Nathan and Josie. Come on."

"It's good." Livia pushed past them.

They followed Livia's friends out a back door blocked by a dumpster to a waiting car.

Alex looked in the rear door, sat down, and pulled Amber in, almost in his lap.

Corbo squeezed in next with Livia right beside them.

Josie opened the driver's door. "Where do you all want to go?"

When Amber told her, Josie said. "No way. The military are guarding the bridges since so many aren't safe. Why do you want to go there?"

"We have to study the fault lines," Amber said.

Josie slid to a stop at a red light. "Why do you want to do that?"

Amber remembered what Corbo had said about Livia's friends. Breath deep. What would Karen say? Something silly that wouldn't work, likely. "Military leaders won't listen to us, unless we have documented facts. We have to find them, so they will listen."

Alex hugged her close.

Josie kicked the gas as the light turned green. "You need horses and mules. You need food. Until this mess is over, you need safety. Can you shoot?"

"I can aim," Alex said. "Corbo and I both have a handgun."

Josie whistled as she pulled out on the road. "Hope the military doesn't find out you sneaked that on base. Okay, I have a plan."

Crowded into the back seat, Amber tried not to squirm.

"I know a ranch near the Hubbell Spring Fault line. You can find supplies, and no one asks any questions. Livia, you remember it, don't you?" Nathan said.

"Yes, I do. Should be the perfect place. Maybe Amber and Alex can even see quake damage there, if they know where to look."

The car hummed along in the dark.

"Do you think we will be able to contact mom, or Dr. Rebecca to share, and update information?"

Alex's hand slide into her own. "No reason to yet. I'll have to keep in contact with dad, when we have a signal. Not much time for fun chat."

Josie swerved around a curve. "Here we are. I have to turn off the lights now."

She turned off the lights, and steered the car onto a tiny dirt road, little more than a path. After several twists and turns through brush and brambles, they reached an open area. A crowded corral of at least forty horses and donkeys awaited them. Several men leaned against the rails.

Nathan walked to one of them. He talked to the man for a long time, and waved to the group in the car to come out.

The creepy men smiled too big, and lounged across the fence. They leered at Amber.

Alex pulled her close to his chest.

The man at the fence pointed to the corral. "Which one do you want?"

The horses didn't look healthy. They stood legs spread, breathing hard, tired, weak, and hungry. There wasn't any grass in the corral, or within reach either. She pointed to a brown horse that stood nearby. It seemed to be looking at her.

"Fine," the man said.

Someone behind him jumped into the ring and grabbed it. The horse snorted. The man led the kicking horse to a gate.

Amber walked forward to the horse being brought to her. She reached out her hand for him, or her, to smell.

"There is the step. Blankets with no saddles." The man held the bridle as the horse snorted and tried to pull away from him.

Amber stepped up onto the stump. "Does this horse have a name?"

The man laughed, and the horse neighed. "Why? They only stay here a day or two. We don't have time to waste on names. This little girl will take you to safety, that's what matters."

Amber sighed as she stretched her leg across the animal's back. She patted her neck. "Don't worry," she whispered. "I'll find your name."

Alex, Corbo, and Livia now on their horses, were ready to go.

"Come on," Livia said, "Let's go this way."

Chapter 23

Ranch and trip to Hubbell Spring Fault

Alex gripped the reins and followed Amber. Not many horses were on Hawaii, so riding wasn't something he had done often.

Livia led them through the bushes down a narrow trail behind the corrals. The men's voices faded out behind them.

Small white stones glittered along the trail in the starlight. Alex's horse tailed Amber's as if used to close riding on dark trails.

Livia stopped and listened. She glanced back at Alex and beyond through the darkness of the trail.

Corbo rode up beside her on the narrow trail. He leaned over and whispered something Alex couldn't hear.

Livia rode a few more horse lengths and turned right into the brush.

Amber followed behind Corbo.

Alex almost didn't see where the trail broke off. Thick brush obscured the narrow opening, and brushy limbs bounced closed behind him.

They jogged down a dusty winding trail.

Livia slowed, and turned right through another brush pile. She stopped the horses in the middle of a small clearing.

Livia was out of breath when Amber and Alex reached her. "Sorry, to have to take you there. We are young women, not a good place for us to go for help."

"Are we being followed?" Corbo asked.

"No. They have to stay at the corral if any other people come for horses. Once we turned off the first time, they wouldn't bother. Now though, they won't quite believe Nathan's story. Which may be a good thing."

"Where are we?" Amber asked. "It's too dark to see much more than the trail markers."

"And everyone is exhausted," Alex said.

"I know," Livia said. "Ahead is a hunting lodge. It's safe for us to lock the doors and sleep there. The horses will have to go inside with us. Nowhere to leave them outside."

Alex slid off the horse, and led him by the reins.

Livia led her horse around a dumpster to the door of a small cabin.

Corbo took her horse's reins.

Livia reached under a stone for a key to unlock and open the door.

Two dingy lights flicked on, swinging on a rope from the ceiling. A concrete floor greeted them. Four cot beds nestled along one wall. Along the opposite wall, were rings in the wall, and wisps of straw. Along the back wall, a dry sink and cabinet were the only other furniture.

"It's not much," Livia said. "It's used by explorers or hunters. There are rings over here to tie the horses too, and straw out back. We will need plenty for the horses, and the beds. Blankets are stored under the cots. There may not be enough if it's cold. We will need to be up, and gone by daylight."

"How will we clean up after the horses?" Alex asked.

"Josie will come. If we hadn't needed horses, she could have brought us here directly through a back road."

Alex helped Corbo bring in plenty of straw and pile it near the cots. He carried the hay for the hungry horses, while Corbo brought in buckets of water.

Amber and Livia piled straw on the mattresses.

"I hope there aren't any bugs in the straw." Alex said.

Amber shivered and held up a tattered piece of cloth. "The best blanket. Someone had goats in here." The chewed up straw covered cloth stunk.

"Stay beside me, if you want to. I'll try to keep you warm."

A hint of a smile teased her lips and eyes. "Okay," she whispered. "Hands off, though."

He wasn't sure what to think. Amber reminded him of someone, and he didn't know who. She needed to stay warm, and Livia had Corbo. He stretched out to try to sleep, at least a few hours.

She sat down beside him, not touching, and pulled two tattered blankets over them.

Alex drifted off to sleep; glad Amber was happy. He had known her five days, and didn't want anything bad to happen to her. As a potential girlfriend, he wasn't sure. He'd wait and decide later.

Tomorrow would be a long day. Somehow, they had to find the reliable data for his dad, Amber's mom, and Dr. Rebecca to put

together and convince the military to do something. What that something was, he didn't yet know. What they found in the ground, would determine their recommendations.

Tom wouldn't be here to help him. He was probably half way home now, and had no idea where Alex was. A call to Tom in the morning might be a good idea.

He rolled over carefully, so as to not uncover Amber. Pitiful stinky blanket. If only he had brought one from the trailer. They should have known they wouldn't be going back.

Alex's body thudded onto the cold concrete floor. The building shook violently. He struggled to fully waken, and rolled over in case Amber tumbled out on top of him. The clumsy cots would offer no protection if the walls fell.

The horses neighed, and pulled on their rings, trying to break free.

"I'll find a candle when it stops shaking," Livia said.

Alex pulled out his phone and opened it. Not much light. Enough to see Amber's pale face. She held onto the cot, and waited the tremors out.

Many times every day they had been here, small tremors had been felt. Most had been so slight; they barely noticed them. This one was far worse. It lasted longer than the others. Something crashed outside.

The floor stilled.

His head and body continued to sway to the waves of the earthquake.

The horses pawed and snorted.

Livia managed to light a candle. "Okay. Now we check the time, and damage."

"It's about 5:30." Alex sat up. His head swayed to the beat of the retreating quake.

"Time to be up anyway," Livia said. "No visible damage in here. Not sure about the structure though. Let me look outside. Amber, call your mom."

Amber pulled the blankets up around her and opened her phone.

"Hey mom."

Alex pulled himself back up onto the cot.

Amber smiled as she listened to her mom.

Livia returned. "The dumpster is turned over, and a few bits of brushy trees have fallen. Otherwise, not much damage visible in this light. Better go outside around back, for privacy. Be back in and ready to go soon."

Amber finished the call to her mom and went to reassure the horses. "Mom was glad to hear from me. She said it's bad there. We should call her back later when she has information."

She brushed each horse's face until they stilled. "Their computers crashed as the quake started, though they were coming back up as we spoke. She's proud I'm willing, and able to search the faults for anomalies. I know what to look for, she says."

"Come on Amber." Alex held his hand out to her. "We'll go outside first, then Livia and Corbo can go."

"I'm a big girl. I can go by myself."

"We have two candles." Livia handed Alex one. "Do you think you can go, and fight off a scared animal at the same time? Alex won't look if you don't want him to, I'm sure."

Alex flushed. "Come on Amber. I care about you, not that!" Her face had turned pale in the candlelight. Something bothered her.

"Livia," Amber said. "Those men, at that place, they won't find us, will they?"

Livia didn't respond at first. "I hope not. Take one of the horses out with you. One of you, keep a hand on the bridle at all times. They will let you know if there is any danger."

Alex nodded and took the bridle of the horse Amber had ridden last night. She seemed gentle enough, though she had pulled away from those men at the clearing. "The horses need a break too before we go."

Amber followed close behind. They went around the building, letting Amber take care of business first.

Alex made sure he watched the tangled brush for any sign of trouble. The horse was calm, munching grass as she relived herself as well.

Amber brushed against him as she reached for the horse's bridle. "Thanks," she whispered.

When he was finished, they walked back inside to retrieve Alex's horse, and their backpacks.

Livia stuffed food from a corner into a bag. "The underground pantry is stocked with food. Grab as much as you can carry." She and Corbo took her horse and went out of the building.

"Okay," Amber said.

Amber took out her "Ring of Fire" pillowcase. She set her jaw, folded it, and added a few cans on top.

"What did you name the horse?" Alex asked.

Amber looked up. "I haven't found her name. She has plenty of spirit when riled, and is calm with me, and you. So you must not be dangerous." She tried to laugh a little. The chuckle died.

He smiled. Nice to know the horse likes me. "Will she answer to a name?"

"You can try." Livia walked back in. "Are your packs full?"

"Almost." Both said as they tried to close the loaded backpacks of equipment and food.

"Let me look for another bag. We are going to try to load them on the horses instead of us," Livia said.

"Not sure that's a good idea," Alex said. "What if they spook and take off with our food and equipment?"

"Keep some in your bag, and some on the horse. Josie will be here later today to clean and refill for the next visitors, if she can."

Livia searched a corner of the floor pantry. She found two more bags, and they stuffed them with a few more cans. "Grab the ratty blankets too. Don't leave anything. Who knows when we will have a roof over our head again."

Alex grabbed the blankets and handed them to her.

Livia stuffed them in, closed the bags, and handed one to Alex. "One bag for each pair. I wish there had been an extra donkey last night. That would have looked suspicious. Now candles out."

Livia blew out her candle.

The sky lightened a little through the open door.

Horses pawed and pulled on their reins, eager to look for water.

"Where are we going now?" Livia glanced at Amber.

Amber's hand rested on her horse's bridle. "Not sure. That fault you spoke of should be around close. Corbo, you know the area, don't you?"

She waited. "Corbo?"

"Sorry. Forgot a nod doesn't make a sound. I can try to find the way to the Hubbell Springs fault, if you show me the map again."

"It's not light enough," Alex said.

Corbo walked his horse out the door. "It might be near a place I found once, when I first started out on my own. It's near here, and I thought it was odd. It was creek, a lot like the ones Dr. Rebecca likes to visit. Maybe you will know. Anyway, it's a good place to stop for breakfast, and by then there will be enough light to see your map." Corbo led his horse outside.

Amber followed him.

Alex led his horse close behind.

Livia came out last and closed the door. Or tried to. It hung at an odd angle and wouldn't quite close.

"I can try to close it," Alex said.

"Don't bother. Josie'll have to fix it, and see if the cabin can be salvaged, or wait for major repairs."

Alex listened for strange noises, any signs of unwanted company. The ground seemed unstable. Stones, leaves, and small creatures continued to shift locations, as tunnels opened and closed around the brushy forest creatures. No birds sang to welcome the day. An eerie silence settled over them.

Corbo led them back the way they had come across the clearing. A trail marked only by white stones led far away from where they had spent the night, and away from the corral they had picked up the horses. Corbo branched off on a wider trail.

Amber rode up beside Alex.

"Are you okay?"

She tried to nod while riding.

He laughed to relieve the tension.

Corbo glanced back at them. "Almost there. That line of brush is next to a creek." He pointed ahead and to the right. "It looks different from what I remember, so be careful."

Corbo picked up the pace.

Amber hadn't complained of being sore from riding. Two hours last night, an hour this morning, and many more to come later in the day. All his friend's sisters would have given up last night. Even Shelly complained of long research days.

They threaded their way through the brush, checking for stability, both overhead, and beneath their feet. In a few minutes, they reached the creek bed.

Only, it wasn't a creek at the moment.

The dry stones didn't trickle with water.

Rocks were damp, and leaves made a thick carpet on the ground. Where the water should run was clearly visible.

The brushy forest was silent. Water evaporated, leaving steaming pools which bubbled. Minnows and crawfish splashed as the mud thickened.

Alex stared. Something about this scene was more devastating than any lava flow he had seen in Hawaii. Even the ones which covered roads, and pushed open doors, creeping across floors. At least there, animals and people had warning. Here, the water creatures would die.

Chapter 24

Hubbell Spring Fault, New Mexico

Corbo jumped down, and held his horse. His hands shook. "That rock, the one shaped like a millstone, I sat there and drank from the creek."

He stepped on the moss-covered rocks in the former creek bed, avoiding the splashing pools of minnows. "The fault is below the creek. At least, I think it is. We need water."

Livia slid off her horse. "Corbo, there are thousands of nearly identical valley and hill combinations in this region. This may not be the same one. When and where did you find the one you are thinking of?"

Alex and Amber slid off their horses and walked up to Corbo.

He turned to them.

"It was two years ago, before I met you, or Dr. Rebecca. I was running and hiding, following the leads I had been given to find Dr. Rebecca. I was being followed by someone." Corbo twirled the twig in his hands.

"Scared, I ran and found a house, a lot like the one from last night. I stayed there overnight. In the morning, I kept traveling. I found this odd place, next to a creek. The rocks looked funny, and were lifted differently than I would expect to be normal. I didn't know much about geology then, so I forgot about them. I rested, found a few berries to eat, and wandered on until I found a road. Two men came along in a pickup truck, and offered me a ride to the city."

He looked around at the scrubby trees. "Come to think of it, that ride seemed longer than the one last night. I was scared though. The two men didn't speak to me as they drove me to Dr. Rebecca's address."

Livia slid down and walked to Corbo. "I am so sorry Corbo that you had to run. It isn't fair!"

He gave her a quick hug. "It's okay. We will fix it in time."

"If we are lost, I'll dig out my GPS unit." Alex walked to a stone to sit down and look through his pack.

"What did you say to the men who found you?" Amber nudged a minnow into a deeper pool.

Corbo sat up. "I didn't say anything. I was thirsty; and they didn't have much water to share. I handed them the note with Dr. Rebecca's address. Their English was as good as mine. So I felt almost comfortable with them. There was something different about them. They talked as if I wasn't there."

Livia pulled away and stared at him. "You mean they looked Mexican, though they didn't speak Spanish?"

"Yes, perhaps. No, they didn't look Mexican. Not average European American either." His brows creased.

"Corbo, you could have been on the Tribal Lands south of Kirtland AFB. We probably are right now. I know the house is near them. Don't worry, as stressed as you were, it must have been an easy mistake to make. They probably thought you didn't speak English!"

The bushes rustled as they all laughed. A cat stuck its head out, stared at them, and stalked off.

Alex smiled. Maybe Mother Nature would heal now. He could only hope. There had been so much damage; surely, everyone had suffered enough. If only Corbo had said something, they might have realized who he was.

Deep in his backpack, under the canned food, the GPS unit hid under a notebook. He pulled it out. The glass glistened in the sun's rays as they peeked through the brush.

Amber's phone buzzed, and she answered it. "Sure Mom. Tell Dr. Rebecca we're fine. Lost though. Alex is checking the GPS. I'll ask. Alex?"

Alex read off their coordinates to Amber.

She repeated them to her mom.

"Sure. We will be careful. What did you say? We are? Okay." Amber closed the phone and turned to Alex.

"We are south of Kirtland AFB, and are on the unpopulated part of the Isleta Indian Reservation."

Corbo groaned.

Amber hid her phone in her backpack. "The good news, part of the fault we are looking for is nearby. Last night's quake was a 7.4 and located near the Magdalena Peak. It did a lot of damage. Bridges are down, more than before. Power is out in many places. The military will be frantic today."

Amber's shoulders slumped. "Our world as we know it is falling apart."

Alex pulled her close. "It'll be okay. You'll see. We will stay together. I promise."

Amber nodded. "Every generation thinks it's the end of the world. In a way, it is the end of the world, as they have known it. We keep living and going on. I want to be an adult and on my own. Even so, I want to be able to call my mom when I need her."

Alex took her hands in his. "We are researching the faults and evaluating the situation. She has the best chance to convince General Nord, not us."

"Should we though? Or should we try to go somewhere safer, as we told the president to do?"

Alex looked out across the land, scrubby as it was. It was changing deep down, even as they stood there. "You've already answered that. The geology can't be trusted right now. We can trust each other." He pulled Amber close to him.

The ground shook. Twigs bounced and dried leaves rattled.

One of many aftershocks. Dozens of small ones could have occurred while they rode. The horses lifted their heads from munching on the scrubby grass. One snorted, lifted his hind foot, and pawed at the ground.

These may not be aftershocks. They may be foreshocks for a stronger quake to come. He shivered. Who knows which to call it sometimes. It may be both a fore and after shock. If enough pressure is relieved, no more will come. If not, it may be adding to the pressure as the plates dip and slide. Of course, fore and aftershocks can occur months, or years, apart from the main event itself.

"Let's go on over the hill," Livia said. "Maybe the creek shifted."

"I'll walk and lead the horses." Amber walked up to her horse and whispered something in her ear. The horse picked up its head, snorted, and trotted off, with Amber scrambling to keep up.

Alex laughed softly, as he grabbed his horse's lead and followed her.

Over the hill, Amber waited.

Sure enough, the horse had found some water, a narrow stream. Enough to allow them to refill water bottles, and let the horses drink.

Amber sat on the ground laughing. "Never tell your horse to find water, if you want to keep up with them."

Corbo and Livia sat beside the stream and chatted.

"Hey, we can save the minnows," Corbo said.

He grabbed an empty can, and carried a few cargos of shimmering fish.

Amber laughed when he poured them in the stream, and they swam off as far away from Corbo, and the can, as they could.

Alex and Amber searched for any sign of a fault line nearby. The light brushy woods appeared normal. Twigs and leaves covered the damp ground.

Amber's horse followed close behind them, as if not wanting her to escape from view. A pile of wet leaves scattered beyond the stream's end. She blew air out her nose and made the leaves dance.

Amber and Alex laughed.

Amber moved the leaves the horse had blown around. "This isn't good." She looked up at him.

He surveyed the area.

A round depression with recent density changes. The ground shifted under his feet. It looked odd. Almost a sinkhole.

The horse backed away.

Alex grabbed Amber and moved backwards as well. A piece of ground the size of a small car collapsed about ten feet downward right where they had been standing.

Dust billowed up. The three turned, and ran back to where they had left Corbo and Livia.

From a safe distance, they watched the dust cloud rise. It reminded Alex of the nuclear weapons testing grounds, not too far away, geologically speaking at least. A nuclear weapon explosion would be thousands of times larger, and more damaging.

Chapter 25

Isleta Reservation, New Mexico

Amber snuggled closer to Alex.

The dust cloud billowed. It cleared enough to step forward. Her scientific curiosity wanted to examine how much the ground had deformed, and determine if the sinkhole would become any larger. Her safety conscious self, wanted to turn and run. Doing so could land her in another sinkhole, or worse, if she wasn't careful. Rocks tumbled as the dust cleared, landing in a scattered pattern down the sides.

"Maybe this isn't the place to be. Let's go on. Which way?" She turned to Livia.

Livia turned red. "No idea. What does your map suggest?"

Amber glanced around at the scenery and pulled out her map. Brushy trees shook in the breeze from the sinkhole. Based on Alex's GPS, and her mom's words, they were near the Hubbell fault. Her mom had said it was a few miles away. A paper map this size was useless. A one square inch fifty-mile radius wouldn't direct them at all.

"I'll find us a few walking sticks." Alex led his horse over to the nearest brush pile to search. "Some of the wood is good. Some isn't."

The place they were at was the size of a pinpoint on the tiny brochure map. Even with an idea of where they should go, she couldn't picture it in a useful way. She needed a computer screen, and virtual map to scroll and enlarge. "Any ideas?"

Corbo walked over and looked at the map. "We don't want to go north; Kirtland AFB is there. East and west are too close to the base border. South we go."

Amber nodded. That would mean further into the reservation.

She pulled out her phone and tried to connect to an online map program. The screen was so tiny; she could only see bits at a time. At least it was better than no map. Eyes scrunched, she studied the map.

Alex handed each of them a walking stick. "Which way is south? My GPS only tells me where we are, it's not a compass too."

Corbo smiled. "Well, let's see. Our shadows point that way. It's early morning, so we know that way is west. So now, which way is south?"

Alex grinned. "Gotcha. I should know that. Let the horses lead the way, they will know if the ground is safe."

Amber climbed onto her horse's back. "I think your name should be Fortune. You're worth a fortune!"

After riding a few minutes, she turned to Livia. "I haven't been on many reservations."

"We took field trips as kids in school. You know how it is. What's close, you have no interest in knowing about. You want to visit what's far away." Livia said.

"Not me," Amber said. "Maybe I'm different. Plus, we moved and traveled a lot. Where would you like to go?"

Livia smiled as she pulled her horse alongside of Amber. "Well, I don't know. The old 'anywhere but here,' I guess. I'd about go anywhere where there is something to do."

Amber tried to follow the trail on her phone from memory. There wasn't anywhere nearby to charge it up, so she had to hope they went the right way.

"Tell me about your friends," Amber said.

Livia looked at her strange. "Can't believe you'd ask."

Amber slowed for a log in the path. "Sure I would."

"They are a group of people who started their own church. I guess there is at least one from each major denomination in it. They want to change things. Sometimes I don't understand what they are trying to do."

Amber picked her way through the dense brush. Back alongside Livia she said, "Do you spend much time at the deli?"

"Some. They want me to go out more."

Livia directed her horse through brush in the path. "Sometimes I think I miss important meetings, which is why I don't understand parts of what the group are doing."

"I hope they are okay with you being with us."

Livia laughed. "You heard Josie. They think I'll manage to find a way to force you to stop the quakes. After listening to Dr. Rebecca and all of you talk last night, I'm not so sure you, or any of us, can stop it."

Amber couldn't answer that. Of course there wasn't any stopping quakes and volcanoes. Unless they were caused by human activity, and only one activity had been known to cause measurable quakes. Fracking was a dangerous process of forcing water deep into the ground, either to exact oil, or dispose of wastewater. Quakes caused by this were generally a magnitude 2.0 or lower. Could the military be fracking on the base? That wouldn't explain the 7.4, 6.9, 6.3, or 5.5 quakes. Unless they had fractured new faults, releasing pent up stress on the major faults nearby. It wasn't supposed to be able to happen. It could though, if there were numerous unknown faults under extreme pressure.

Water tables had shifted in recent years due to drought. Alone that would increase pressure on local faults. And potentially affect magmatic flow. Alex would know. Later, she'd ask.

Alex and Corbo rode in silence ahead, picking out a safe path for those behind them.

Amber was afraid to talk to Livia now. It brought out even more things that could go wrong. At least she knew a little about her now, and they could travel without worrying about her sabotaging their efforts. She was lost in thought when her horse stopped with a jerk.

Alex had stopped, turned around, and grinned. "Sorry, we couldn't hear your voices anymore, and had to stop and be sure you were okay."

Amber blushed and waved her hand. "Go on. We'll yell if there is trouble."

"Yes ma'am." Corbo tipped an imaginary hat as he turned forward and grinned.

Amber's cheeks warmed, and the tip of her nose turned red.

Alex laughed.

Soon, the land changed. Alex slowed down. "Time for a break I think. We need to stretch our legs, and eat."

Alex slid off his horse and walked back to catch Amber as she slid off Fortune.

His arms eased her aching muscles for a moment as he helped her down. Her bottom was sore from the unusual posture, almost as sore as her legs. In fact, trying to walk after riding a horse is a lot like trying to walk after riding in a boat for hours. Almost funny, and drunk. Giggling at that thought, she staggered behind Alex to the stump to sit down and eat a snack from her pack.

Alex's phone chimed. He checked the screen, and answered it. "Hi Dad. Sure. How much change? We can go there. It'll be a long ride. We have horses. Livia never did say for how long. Okay. Miss you too." He hung up the phone.

Alex shouldered his pack and reached for his horse. "We have to cross the river. Magdalena Peak is showing massive deformation. We need to verify."

Corbo closed his pack. "Let's go south another half mile, then turn west. With good luck, we can reach the river about 2am and cross in the dark. The horses can swim, and we can ride, if we can hold on. Sorry we couldn't make it in daylight for you Amber."

"That's a lot of hours to ride," Amber said. "I'm sore."

"We all are," Corbo said. "We can take a few breaks."

"I'll be okay. Let's go." Amber shouldered her pack and whistled for Fortune, who came when she called. Painfully comfortable, riding Fortune seemed almost natural after the events of the last few days.

"It's about thirty-five miles to the river. Let's trot for ten minutes every hour, and that should help," Alex said.

"We've probably already rode ten miles with breaks today," Livia said. "I'm, sorry my friends took us farther away, instead of closer to the river."

A motor interrupted their formerly silent travel through the brush.

Amber rode up beside Alex as they entered a clearing.

In the distance, two four-wheelers traveled in their direction. There was nowhere, and no time to hide.

Amber rode forward for better view.

"Amber, come back," Alex yelled.

Amber ignored his call.

The two people on the four-wheelers hesitated, and stopped. One stepped off, and pulled her helmet off.

"Who are you?" The woman asked. "Do you have permission to be here?"

Amber glanced at both riders. "I'm Amber. My friends and I are lost. We are trying to return to the river."

The woman held the helmet in her hands and looked behind Amber. "You're a long way from the river."

Amber did not look backward. "Please help us. We know we shouldn't be here. It's a long story."

The woman grunted. "You probably don't deserve help. Call your friends forward."

Amber waved to her friends.

The other three horses trotted up beside her.

The woman said, "Hi. I am known as Windy, and my friend is known as Champ. Tell me what you are doing here. You are a long way from the river."

"Hi Windy. Sorry to intrude on your land. We are weary travelers mixed up in an adventure we didn't plan," Amber said.

The woman almost smiled. "Aren't we all mixed up on trails we don't wish to be on. Go on."

"Alex and I are strangers to this region, here to study the earthquakes. Corbo was helping, and Livia tagged along. We left the rest of the scientists, when the group spilt up to research different areas."

Windy watched her for a long moment. "I don't think you are telling the whole truth. There's a creek over there. Let's go sit down." She jumped on her four-wheeler and took off.

Amber rode Fortune behind Windy.

A short trot over the rise, and they reached the creek, Fortune went straight for the water. Amber laughed. "You know what matters, don't you?"

She slid off, and walked over to where Windy and Champ sat on a rock.

"Amber, tell us more about why you are here." Windy said.

"Brandon and Dr. Evan joined the mining team. Tom went home to bring Alex's dad to a safe place, and Mom and Dr. Rebecca stayed on the base."

"And?"

Alex's hand rested on her shoulder. "We left the base."

"Why?"

"We need more specific information. We had planned to talk to the governor to encourage people to leave before the quakes become worse. There isn't much time," Alex said.

Windy nodded. "So you ran away on your own to find the answers faster than the bureaucracy would find them. Okay. This is no place to hide. Too open. And you shouldn't be here without permission."

Amber nodded. "Please help us reach Magdalena Peak. We need to make sure the volcano there isn't about to blow."

"You think Magdalena Peak is causing the quakes?" Windy asked.

"Some volcanic activity is occurring there," Alex said.

"Some of the quakes are occurring on ancient fault lines," Amber said.

"I think it's the military installations," Corbo said. "They need to fuse the fault lines."

"My friends say we are being punished. We have to change. Exactly what, and why, they don't say," Livia said.

Windy watched each of them as they spoke. She turned back to Amber. "I think each of you has told the truth as you know, or believe it. We were here to find quake damage ourselves. We live over that rise."

She pointed. "You don't have much time. Not sure if you can help others or not. Come on. Lead your horses. I'll take you in the horse trailer as far as I can. We can hide you behind hay bales if need be. It isn't safe for you to be here." Windy turned in the direction she had pointed.

"Are the Native Americans blaming us?" Amber asked.

She turned back to Amber. "Everyone is blaming someone else. No one is completely innocent. No one is completely at fault. Now, we have to have you out of here, and us back before dark. Curfews are being threatened."

Amber shivered as she grabbed Fortune's bridle and followed Windy. Everyone else followed behind them.

"I think blowing up the fault lines would make them more dangerous," Amber said.

Windy trudged on. "Popping a pimple lets pressure and pain out. Blasting a fault line open might let out some pressure. However, in time, that pressure will rebuild. The next slip, perhaps many generations from now, may be far more serious, with mudslides, collapses, and who knows what other devastation."

They topped the rise. A tiny ranch house appeared, with a corral similar to the one they were at the night before. She shivered at the memory.

"You okay?" Windy asked.

"Sure, it reminds me of the place our horses come from. Not a nice place."

Windy nodded. "I think I know the one. The trailer is behind the house. Champ will be back in a minute with the other four-wheeler. Go on around and lead the horses into the trailer."

Amber walked Fortune around the house and up to the trailer.

Fortune stopped, nickered, and pulled back.

"Don't worry girl. I am going with you." Amber stepped in, found a ring, and attached the bridle. She sat down on a hay bale nearby while Livia, Alex, and Corbo settled their horses.

Chapter 26

Isleta Reservation to Rio Grande River and on to Magdalena Peak, New Mexico

Amber sat on a hay bale and watched how well each of the others cared for their horses. Fortune chewed hay contentedly nearby.

Alex's horse backed and fussed, settling in when Fortune neighed. He patted the horse's rump.

Livia's horse calmly walked in and waited to be hooked to the ring in the side of the trailer. She rubbed her horse's back where she had been riding.

Corbo's sweaty horse clambered in, looked to the back, and settled by the door. He blew and snorted as Corbo hooked him to the trailer. Corbo found a rag to wipe the horse down.

Alex sat down beside Amber and pulled his pack between his legs.

Amber bent over to whisper in his ear. "Can they be trusted?"

Alex nodded. "We have to, for this. I'm not sure what they are doing here. Don't ask."

Amber hugged her backpack. Hopefully, Windy would take them where they needed to go.

The truck rumbled to a start. Windy pulled down the road, picking through deep ruts.

Even though Amber was sore from riding, it seemed the truck wasn't going much faster than the horses could.

Empty scrubland passed. Not a house in sight.

Windy slowed the vehicle and turned the engine off. The front door slammed.

Windy opened the back door.

"Hide behind the hay bales. Make it look full back there. We have reports that the roads are bad a few miles on. We may be stopped and searched."

Windy slammed the door shut and slid the lock in place. The truck door shut, and the engine started.

It only took moments to adjust the hay bales, making it look full.

"We'll go near the cultural center," Livia whispered as the group huddled close. "It's beautiful and so relaxing. If only we could see it."

The truck slowed.

Fortune snorted.

"Stop!"

The truck stopped. The trailer jarred as the momentum pushed it forward into the truck bed.

Amber's head hit Alex in the shoulder. His tense arm muscles held her close.

The truck door opened. "The window on this old truck is broke. What is the matter?" Windy said.

"No traffic is supposed to be going out. We have to make sure you don't have any contraband." The voice said.

"Nope. None here. Moving a few horses. No alcohol, drugs, or anything."

"Sorry, orders have to be followed. The roads are a mess. Travel is virtually impossible. Can you imagine if everyone tried to load up and leave?"

"They'd clog the broken highways," Windy said. "I know."

"We have to be sure people aren't panicking from the recent events. And there is nowhere for them to go. People have to stay where they are for now."

Amber smiled at the fear in the man's voice. If a policeman was so afraid already, and it was only going to become worse, she could imagine what the population would do. Right now, they thought it would all be over soon, if not already.

"Go ahead and look," Windy said. "All we have are a few horses going to the relief efforts. Nothing important to you. We have a change of boots back there, and a blanket or two. Even a day's worth of food in case the tires blow."

"Okay. Where are you going anyway?"

"My instructions are, let me check." Windy said. Papers rustled. "A little place near Socorro. They are staging rescue teams near there. They wanted six horses, so we have to stop and pick up two more."

The lock slid and the door opened.

"We are late already with all the new road ruts," Windy said.

Fortune snorted and stamped her foot. The other three horses followed her lead.

"Um. Okay," the man said. "You are free to go. Drive slow and careful."

"I will," Windy said.

The back door slammed shut, and the horses settled down. Fortune pulled wisps out of the hay bundle.

The front door slammed and Windy drove off. She steered to avoid potholes, and other road hazards, causing them to slide into each other with every curve and turn. The truck rolled to a stop. Was this as far as they were going?

"Come on," Windy said. "Glad you played it safe back there. You all take the horses out and stretch their legs. The point you want to visit on the river is about two hundred meters south of here. Be back in one hour, or we go home."

Alex moved the top hay bales out of the way.

Amber clambered out from behind the hay bales. She took Fortune's bridle, while Livia and Corbo took their horses out first. As she passed Windy she said, "Thank you so much. How far are you willing to take us?"

Windy patted Fortune's neck. "As far as we can. Go now. Be back in an hour."

Amber walked off with Fortune by her side. She caught up with Alex, and they held hands. It wasn't far to the river's edge.

Rocks had tumbled down the bank into the river. Boulders needed far more force than a gentle quake to have been disturbed. Trees, shrubs, and a few animal carcasses littered the river's edge.

Amber turned to take in the whole scene.

"Don't look back." Alex grabbed her shoulders.

Her face drained of color. "What?"

"Around the bend we can study the river."

They passed a boulder and the trailer was now hidden from view behind them. "They had something on that trailer. I'm sure of it. There were a few packs in the other corner under the blankets. No idea what, or who."

Corbo nodded. "Could be Mexicans, pottery, stolen goods, or artifacts they have dug up. We don't know. They will take us to where we need to go. So be quick, and don't look until the hour is up."

"Um, should we have a look out?" Amber didn't want to think about trouble. She had been trained to be more aware of danger while in other countries. Not her own.

"I'll do it," Livia said. "I don't think it was Mexicans. I know most of the runners in the area. Something else. I'll be best at look out, and guard the horses."

Livia tied her horse to a bush. "Sorry Amber, I won't be able to practice what you showed me. Tie the horses to this brush, and I'll stay here."

Amber handed Fortune's reins to Livia. She glanced back at the river. It would take a lifetime to fully comprehend the consequences of the last few days' worth of damage to the river. If Mother Nature wasn't done rolling over, it would change again, perhaps many times before it stilled enough to effectively be studied.

A hundred years ago, the Rio Grande flowed much stronger through this region. Several dams up river had reduced its flow well below normal. Ecosystems that had evolved to depend on the annual floods, silt deposits, and fish migrations suffered from the lack of annual flooding. It looked even narrower than she thought it should. They hadn't seen this stretch of river before. It was a few miles south of the interstate crossing.

"The river is dammed somewhere. If it breaks, water could gush onto the flood plains here," Amber said.

Alex pointed to the boulders on the other side they had already seen. "All it would take is a few of those up river to have an effect. I don't even see the normal water line. The water isn't flowing right either."

The water swirled more than it flowed. Animal carcasses brushed up against the shore, and back out, like a gentle tide rolling on and off the land. Logs floated by, slowly, catching eddies, and drifting further toward one shore, or the other.

The hour sped by as they explored the damage, and the old and new twists in the rock. It was evident there had been many quakes here in the distant past. A good predictor of what was to come.

Livia called them to come back as they explored one particularly twisted formation.

Amber could spend a whole month on that one twist, trying to unravel its stories. Even that might not be enough. She hurried back to grab Fortune's reins.

"Josie called again," Livia said. "Almost wish she would leave me alone. She wanted to know where we are."

"What did you say?" Amber asked.

Livia laughed as she handed Alex his lead rope. "I told her we are lost. I don't think she believed me."

Windy and Champ waited for them on the tail of the trailer, eating and talking.

"Good. You did decide to come back," Windy said. "Wasn't sure if you would try to go the rest of the way yourselves."

"It's a long ride," Alex said. "We appreciate your help. Though I'm not sure how we can repay you."

Windy smiled. "Don't worry. It is nice to see the countryside. We don't leave our home on the reservation often. It's normally all we need."

Once the horses were hooked in, Windy closed the back door.

Amber leaned back against Alex's chest in the hole they had made in the hay bales. "She seems happier. Not sure if we should be scared of her."

"Fortune would let you know if there was a problem. That horse has bonded with you. Maybe they made enough money to buy something they want."

"As long as they didn't sell us, or the horses."

The trailer swerved around a curve and picked up speed.

"I can see out a tiny bit," Livia said. "Amber, do you and Alex want this spot?"

"Sure, thanks."

It took a few minutes for everyone to change positions. The trailer wasn't moving as fast as she thought it was. The sides of the road crumbled, raised in places, lowered in others. Far off, fumaroles had developed. Sand blasts had covered the area in fine grains, turning flat ground into molehills.

After what seemed like hours of viewing devastated scenery, and few other vehicles, the trailer slowed down. They took the next route west. Mountain peaks rose in the distance. Above them, a thin trail of smoke floated on the gentle breeze.

Alex whistled. "I hope that's a camp fire somewhere."

"That wouldn't be safe," Corbo whispered. "Way too dry around here."

The truck stopped. Amber closed her eyes for a moment. It was almost dark now, and it had been a long day.

The trailer door opened.

"Okay everyone. Stay quiet. Go west a few miles. It's the tallest peak in the area, and growing taller," Windy said.

"Is the smoke coming from it?" Corbo asked.

Amber untied Fortune as she listened.

"Not sure. Hurry, we mustn't be seen. Good luck with whatever you are trying to do," Windy said.

"At this point we're simply gathering facts." Amber passed Windy. "Thank you so much for bringing us here."

"No problem. Gives me an excuse to go visit my brother." She closed the door and hurried back to the truck.

Amber followed Alex off into the brush pile.

The truck roared to life, and with the crunch of gravel, was gone.

Even with Alex, Livia, and Corbo beside her, she felt more alone than ever before in her life. Abandoned without her mom or her best friend in a seismically unstable environment. Amber blinked. She could do it, if they could. Here math didn't matter. Survival mattered, not the order of numbers in the program.

Amber pulled out her phone. No update from Karen. She must still be checking worldwide updates.

Alex had his GPS unit in his hand. "We are in about the right place. If the GPS satellites haven't been knocked too far off course due to the recent events."

"How long does it take them to reset?" Amber asked.

"Depends. This one is good, not intended for rapid change though. I think we best follow the trail of smoke. Corbo, can you lead us?"

Corbo nodded and walked down the trail.

Amber patted Fortune's face. Soon, they would be trailing through the scrubby desert. It could be fun to pretend they were explorers, and no person had ever been here before. Of course, in a sense that was true. The mountain had grown, and was trying to become a volcano again.

No one had ever seen it as it was now.

Chapter 27

Magdalena Peak, New Mexico

"Let's go!" Alex said.

His horse neighed and tried to take the lead. He reined him in, and kept him prancing beside the road.

Corbo walked his horse up the trail, away from the road.

Amber, with a faraway look in her eye, climbed on Fortune and glanced back and forth down the road. She grabbed the reins and followed Livia past Alex.

Alex waited on Amber to ride up beside him. He figured it was better to ride beside her, or behind the group as a whole. He didn't fully trust Corbo, because of his wish to fuse the plates. Right now, they were all hoping for the same thing, answers.

Once those answers about Magdalena Peak showed themselves, Corbo's actions would have to be reevaluated. He and Amber may have to separate from them, and go on their own, in this truly alien landscape.

And then there was Windy. She could be anybody. Her helping them seemed out of character with the stories he knew of mainland Native Americans.

What if this was a trap? His dad had warned him of traps laid for scientists. Usually, they were in developing countries where the government, or the citizens, didn't want answers.

Alex checked his GPS. It said they were near the redeveloping volcano.

That hour had been enough time for Windy to make many calls. Someone could be watching them, waiting to ambush them while they rode or surveyed the canyon. Perhaps they should go somewhere else instead.

The rough terrain was littered with shrubs, boulders, and rocks of all sizes and shapes. Some of the thick, prickly, scrubby trees hid parts of the path they followed. It would be difficult for them to hide on horseback. People on foot could easily hide, if they had arrived first.

"Everyone, let's stop. I'll be back in a minute. Corbo, keep watch." Alex reached in his pack, and felt the outline of the gun. Within easy reach.

Amber's face turned pale.

He turned his horse and trotted back to the road. They hadn't gone far. A few minutes, and the road stretched out before him.

The horse reached the trail opening. Alex reined him in behind some brush. The wavy road stretched out in both directions, with no sign of traffic. He tied the horse to a branch, and walked along the roadside. There was no sign of horse, or human tracks other than their own, for several hundred yards.

A thought nagged at the back of his mind. It must be worry about the volcano. If it erupted while they were there, they had no chance of escape. Better to camp soon, and safely, so they could ride there and back quickly in the morning. Where they would return to, he had no idea.

The horse nibbled branches calmly as he approached.

Something rustled off in the distance, beyond the edge of the roadway.

Alex jumped, reached for his gun, and turned.

A rabbit scurried across the road.

Something twinkled on the side of the road. It could have been nothing, a trick of sunlight on a piece of metal on the road, or volcanic gas seeping, preparing to create a new fumarole.

Alex's brow wrinkled. This landscape was changing too fast for him to keep up. If only his dad, or Tom, were here to help him decide what was important, and what didn't matter at the moment. Amber could help, with her knowledge. Depending on her, and short phone calls to his dad and Dr. Rebecca would be all the help they would have to analyze the dangers popping up in every direction. Until their batteries ran out, that is.

Magdalena Peak steamed ahead as evening closed in. Time to ride. If they found enough information, they could try to save the local communities. If not, they'd have to keep searching.

Alex placed the gun in his pack. He turned the horse from the road, and trotted back to the group.

Perhaps he should let them know his fears. His eyes closed. The memory of the empty road stretched before him, and his stomach clenched. Something unseen had startled the rabbit. Who,

or what it was, would have to remain a mystery. No time to explore the road.

Corbo had a gun and could shoot, hopefully to kill or wound, if necessary.

Alex had a better chance with a walking stick, since his collection tool had been left behind at the base. A shot would grab attention, good or bad. Best to keep the guns put away unless they needed to scare someone. Walking sticks might be their safest protection, as long as no one snuck up behind them.

Amber waited where he left her. Livia and Corbo a few horse lengths away, whispered to each other. His horse neighed and stopped beside Fortune.

"I couldn't see any signs of anyone following us. No tracks. One odd sound, it could have been anything. Amber, Livia, be sure and stay with Corbo, or me, at all times."

His horse pranced, ready to travel on.

"Corbo, you ride in front. Amber, go next behind him. Watch one side. Alex, then you can come," Livia said.

"No," Alex interrupted. "I have the second gun. I need to go last."

Livia rode back to stop in front of him. "I know the region better, and what to listen for. I'll yell if I see or hear anything."

"Okay, let's go then." Alex moved out of the way to let Amber go on. He shook his head at Livia as he passed her, and caught back up with Amber on the trail, barely wide enough in places for both horses.

Corbo's horse trotted down the winding trail.

"I wish we could go somewhere else," Amber said. "A live volcano is so different from fault lines."

"Where? We don't know if Windy alerted friends, or not. We don't know when a foe may turn friend, or a friend turn foe."

"With the world changing under and above us, will we ever find the stability our parents knew?" Amber steered Fortune behind Corbo on a narrow strip of trail.

By air, it was about five miles to the peak's summit. With brush, and land deformation, it could be double that distance. By horseback, it could take hours to reach the peak.

Corbo led them off to the right along a narrower path.

Magdalena Peak was a popular destination. This trail couldn't be the one visitors travelled on. There hadn't been a parking area, or observatory. Windy had let them out away from the main trail for some unknown reason.

Alex turned to face Livia as he rode. "Where's the main trail to the peak? This can't be it."

Livia's horse picked its way through the brambles. "It's probably been blocked by rangers, and may be guarded. Better to travel this oryx trail they aren't watching."

"A kind of burro?" Alex asked.

Livia laughed. "Not exactly. An African antelope the military brought in to keep brush down on the bases. Some escaped, and have created havoc in a few delicate landscapes. The environment is changing to accommodate them by increasing brush growth rates."

Shadows crept across the ground as they rode. Silence in the brush. No small mammals scurried about their dusk time search for food and shelter. Night was almost upon them.

"Amber, ask Corbo if we should camp soon. Not sure if we are safer nearer, or farther from the road."

Amber jogged up beside Corbo.

Corbo pointed and kept going. Any verbal response whisked away, and Alex couldn't hear it.

Amber slowed for Alex to catch up. "He says around that bend should be a good place."

There would be time to find wood and build a fire to keep wild animals at bay, if there were any left in this area.

The trail bent around a little thicket of bushes. Thorns and branches reached out to grab unsuspecting travelers. They shook their heads, and some of the twigs fell out, while others remained tangled in manes and tails.

Alex swung down from his horse.

"Amber?"

"Be there in a second." Amber walked back around the brush. "I was watching. It's okay. No animals though."

She brushed at her hair with her fingers. "It'll be dark soon. I hope there are no scorpions out here."

Fortune nibbled at the brush pile. "Sorry there's no water nearby. At least there was some on the trailer." Her hands brushed bits of dirt and twigs from Fortune's mane.

"Please don't wander off," Alex said.

"There's a ravine on the other side. Maybe we should check it out before dark," Amber said.

A ravine would be a good place to gather wood for a fire. They would leave early in the morning, and might not have time to thoroughly check it out then. Signs of ancient quake and volcanic activity might help them with their analysis. He'd have to remember what Amber had showed him earlier in the day, about quake lines. She shouldn't be in a ravine if another event occurred. It might be too dangerous.

"We'll set up camp. It won't take long." Livia pulled the extra bag of blankets off her horse.

"Okay. We won't go too far. Be right back."

Alex followed Amber around the brush pile. A typical ravine yawned in front of their feet. No stratified rocks visible, like the noticeable quake damage on the riverbank. Research here wouldn't be instant recognition.

Amber picked up a small stick. As she walked along, she pointed out resting rocks that hadn't moved, and rock layers that twisted, and jutted out, without soil or vegetation coverage. She dug in a few spots, to look closer at the deformations.

"What do you see?"

"If no seismic activity was going on here, I'd be excited to study these formations. It could take years." Amber turned from digging to look at him and point to an interesting multi colored swirl.

"See this spot? Here is where the rock has twisted on an upward journey, and fallen again, twisting even more. I bet it follows the pattern of the Magdalena volcanic eruptions. I don't have the equipment, or time, to date it correctly. However, I can guess it's from the last eruption."

"That was thirteen million years ago." Alex rubbed the lines on the rock.

"That eruption built the landscape then, and even now." She turned to the peak.

Rising steam faded into the shadows of nightfall.

He took her hand. "Come on, let's go back to camp. The peak has been rising at about two millimeters per year for centuries. The last few weeks, it has risen almost two feet. I'm almost scared to be here."

Beyond the ravine, camp waited, with Corbo, Livia, and food. "Are there many fault lines right here?"

Amber climbed around a brush pile. "Most definitely. I've never seen a detailed fault map of this location. Many are small faults that can be guessed at by the twists in those rocks. The stress and strain has built up over thirteen million years, or more."

"An earthquake could open a trap door causing a sudden upward surge of magma," Alex said.

Amber reached the brush at the edge of the ravine. "Magma movement could break smaller, tense faults wide open."

"Or it could cause an internal rock slide, damming the magma chamber, increasing the pressure." Alex groaned as he said it. "I'm calling my dad in a few minutes. Let's eat first."

They walked around the brush pile that hid the campsite.

Livia and Corbo ate from cans beside an unlit woodpile.

"What did you see?" Livia held a spoon almost to her mouth.

Alex sat down and opened his pack. "Between the two of us, not good things."

He pulled out some canned beans and nuts. "How much food do we have left?"

"If we all have the same amount, maybe a day's worth. Not much we can gather around here."

"And almost out of protein," Corbo said.

"We may not have much time."

"Why?" Corbo asked.

"The stresses on the faults are right under our feet, and on up to the peak. It doesn't look good. If it is bulging, who knows which may go first. The volcano, or any one of numerous faults. And whichever goes first, will set the other one off."

Corbo finished his handful of nuts. "What do you want to do? Is it too late to escape?"

"We have had thirteen million years to go away. Now we are right in the center of an active geologic movement." Alex took a bite of beans.

The weight of his phone in his pocket urged him to call his dad. The last bite of food was halfway to his mouth.

A sudden sharp, loud sound ricocheted through the night.

The horses pulled on their leads and neighed, pounding the ground with their hoofs.

Alex dropped his fork and glanced around.

No sign of the gun, or the shooter.

"Down on the ground!" Corbo said.

"Where?" Alex lay on the ground.

"Not sure," Corbo said. "Wait and listen."

Amber crawled over to Alex and leaned against him.

Chapter 28

Magdalena Peak, New Mexico

As the sound of the gun ripped through the air, Amber slid onto her stomach. She crawled over to where Alex was.

The horses neighed and pawed the ground.

"We are out in the open, an easy target. Being in the bushes wouldn't help either," she said.

"Stay close," Alex said.

"What about the horses?"

"Hopefully they won't escape," Livia said. "We need them no matter where we go."

The horses pulled away from the brush and snorted.

Amber lifted her head.

Fortune stared right at her.

Amber moved forward.

The ground shifted.

She wavered, balancing against each wave as it rolled through the ground.

"Oh no. It feels like someone jumping on a waterbed!" Livia said.

The ground continued to roll as the horses pawed, and tried to stay upright.

A few of the bushy trees fell over near the horses, spooking them more.

Trees and rocks crashed in the ravine.

A large plume of smoke spiraled above the bushes from the mountain peak.

The ground moved, rolling and twisting under them.

Alex put his arm around Amber.

As suddenly as the ground started moving, it stilled.

A loud crash sounded from the ravine. More crashing and rolling echoed as boulders and trees tumbled.

Alex's face turned pale.

Amber jumped up, grabbed Fortune's reins, and ran around the brush pile.

As she reached the ravine, the devastation mushroomed in front of her. Brush that had been along the sides was now piled at the bottom. There was no way they could have safely explored it in the morning.

She took a deep breath, knowing she had been down amongst the brush only moments before.

Alex came up behind her. He held his hand over his eyes as he tried to see through the spiraling dust cloud, thickening darkness racing to overtake them.

"Help!"

"I don't know that voice," Amber whispered.

"Help, down here." Someone grunted in the ravine.

More brush crashed below them.

She shivered. A deserted mountain was no place to have unexpected company so close to her and her friends.

"Wait a minute," Alex yelled.

Corbo and Livia ran up behind them.

"Who is it?" Corbo said.

"Doesn't matter, we need to save them," Livia said.

"Trapped under a log."

Alex grabbed his flashlight from his pack and started down.

Livia was right behind him.

"Amber, you and Corbo stay there. We may need a rope." Alex slid through the fallen brush.

Corbo ran back to their packs for a rope.

Alex slipped and slid down the slope. Small rocks and pebbles, already disturbed, slid down to the bottom of the ravine.

"There he is," Alex said. "Is there anyone else with you?"

"Not here. Please help."

The light from the flashlights shook and swayed as Alex and Livia worked to free the man.

Amber leaned closer.

The darkness kept Alex and Livia invisible. As they moved further away, their voices became too low to hear.

The ground under her feet stirred.

Amber fell to the ground so she wouldn't roll into the ravine below. She crawled closer to the edge to watch.

The ground rumbled as rocks and trees slipped and slid further down on top of the already shifted debris.

A high-pitched scream, echoed from below.

Amber peered over the edge.

Light bounced eerily from the flashlights across the night sky.

Groans resonated as more branches fell, and Alex yelled.

The ground stilled.

It was a relief.

She and Corbo needed to climb down and reach Alex and Livia quickly. Another quake could happen, and they could be hurt too. She couldn't leave Alex down there.

As she stood and started to slip down the side of the ravine, Corbo grabbed her arm.

"Wait a minute. Let's call to them first."

"Alex? Livia? Are you okay?" Amber leaned forward as she listened.

"We're here. Livia says her ankle hurts."

"Can you climb?" Corbo asked.

"I'll have to try. We had a spot cleared out before that quake. Ugh."

Brush shifted down below them.

"Do you need us down there?"

A large limb fell. Rocks scattered, cascading down the hill.

"No Amber. Stay there. I will help Livia out first. Corbo can help me carry the man out."

Corbo took a few steps down the embankment.

Amber shined her light on him.

Corbo waited, not moving.

Branches and rocks scattered below them. Moments crept by waiting on Alex and Livia to scramble through the debris filled trail.

At least the faults had calmed, for the moment.

Heavy footsteps broke branches nearby.

Alex stepped into the light carrying Livia. "Take her to camp Corbo. Amber, go take care of her." He was breathing hard.

Alex placed Livia in Corbo's arms.

She wrapped her arms around his neck and whispered in his ear.

Alex's left arm had not held her. It hung limp at an odd angle. He slumped down as Corbo turned to walk towards camp.

Amber rushed to him. "Are you okay?"

"I will be. Have to. Find some sticks. To set the arm. As soon as. We help. The other person. Up." Alex panted. "Go to Livia. Hurt her ankle."

Amber waited until Corbo returned, then ran to stay with Livia. Though they hadn't seen many animals nearby, there might be a few predators around here. Livia couldn't fend them off. As she rounded the corner of brush, she reached out her hand to rub Fortune's face as she passed. The warm breath on her hand comforted her as the evening chill settled in.

Livia rested with her head on her backpack. Her pale face shone in the gathering dark.

Amber rushed to her own backpack to grab the first aid supplies.

"What do you need?"

"It's my right ankle. It twisted as I fell under the tumbling brush."

Amber shined the light on the ankle. The first round of swelling had passed. The next round would take time. She wrapped Livia's ankle. "If it's too tight later, let me know."

Livia nodded. "The man was trying to help us. He won't say much."

"Do you know him?"

"No." Livia winced as Amber tucked in the end of the wrap.

"Wish I had matches to start the fire."

"Corbo does. He'll start it when he comes back." Livia pulled herself up to a sitting position. "Is it done now? Will it move more?"

Amber pulled her pack over next to Livia. "No. Next quake may be anytime, or a hundred years from now."

Livia groaned.

A string of piano chords broke the gathering darkness.

"My phone is in my backpack," Livia said.

Amber found the phone and handed it to her as the music stopped.

Livia groaned as she answered it. "Hi Josie. No please don't. Don't pray for the quakes to continue! I'm on a mountain, and I'm not going down until we reach the top."

Livia grabbed a stick and poked at the empty fireplace. "No Josie. You can't come." She ended the conversation with a groan and dropped the phone in her lap.

"You okay?"

"She still thinks I can make you stop the quakes. Now she wants to have a group come pray over me so I will do what they want me to do. What is going on?" Livia trembled.

Amber touched her arm. The trembling continued. If Livia started crying, she didn't know what she would do.

"Call your mom. Maybe she can help," Amber said.

Livia squeezed her hand. "Mom's never helped before. I don't want her to know I'm hurt. I don't know what she would do."

Amber understood. Mothers could be confusing sometimes. Her own mother often seemed closer to Karen than to her. Livia had nothing in common with Karen. If it were Karen with a hurt ankle, she'd hug her, and they'd tell stories to keep her mind off the pain.

"Tell me about the group," Amber said.

Livia shifted against the backpack. "They are an interesting group of people. Josie and Nathan I've known since first grade. We used to play together on weekends. Mom would drop me off, so I didn't interfere with the mass of customers at the deli."

Amber listened. She had never been told to stay out of the way. "My mom wanted me to help, and I wanted that to. Did you want to work in the deli?"

Brush tumbled in the ravine.

Fortune nickered.

"Never thought about it," Livia said. "Josie and Nathan joined a church group, and we would run around helping others to clean up and restore the local community. Sometimes, we rescued and ran Mexicans in and out of the country, to visit family members. Somehow, something changed after the leaders decided they wanted to revert the community to its original condition, and use it as desert farmland."

Limbs crashed near the lip of the ravine.

"Don't see how," Amber said.

"Almost there." Corbo stepped around the brush.

Amber's flashlight revealed Alex and Corbo supporting a man between them. The man was extremely pale. They helped him sit down, and Amber grabbed her bag. "I'm not sure how many supplies I have left."

The man groaned as his twisted leg touched the ground. "Thanks."

"I'll be back in a few minutes." Alex trudged off. His left arm dangled.

"Let Corbo go." Amber said.

Alex ignored her.

"What can we do for you?" Amber turned to the injured man.

He pointed to the pack Corbo had carried up.

Amber opened it.

A rabbit dripped blood over the contents.

The pack spun as dizziness threatened. Her food rose in her throat. She sat the pack down. "Your dinner?"

He tried to shake his head. The motion moved his left leg, causing him to groan. "Yours. Trying to help."

Amber handed the bag to Corbo. "You know more than I do, please."

Corbo took the bag, opened it, and pulled out the rabbit. He lit the fire and prepared to skin the rabbit.

Amber looked back to the man.

"Who are you? Why are you offering to help?"

The man watched Corbo skin the rabbit. "Can't tell you. Trust me."

"How bad is the leg?"

The man shook his head.

Alex returned with three long sticks, and several shorter ones. "Okay," he said to the stranger. "Time to check your leg."

Amber turned the light toward the stranger's leg.

His lower left leg bent to the left. He wasn't walking out of here. "I don't want to call you 'the man,' is there anything we can call you?"

The man thought for a moment. "Call me Guide, I am a trail guide." He groaned as Alex shifted his leg with one arm, preparing it to be splinted.

Alex turned to Amber. "You'll have to splint his leg, then my arm. I have more rope in my pack. I don't know anything else to use."

Amber splinted Guide's leg while Corbo held the limbs tight to it.

Alex sat close by and held his arm.

She reached over and pulled his shirt back to see the damage in the firelight. "I hope you haven't made your arm worse."

He grinned at her. "Nope. Inflamed it enough so that it will be all the more ready to move." He groaned as Corbo adjusted his arm bones and held them.

Amber splinted it, and took an extra shirt she had in her pack to make a sling for him.

"I guess we go back for medical treatment tomorrow. What about Guide?"

"Go without me," Guide said. "People know where I am."

Her hair stood on end. "Good people, or not?"

"Good people. They will find me tomorrow. Go on." Guide motioned toward the mountain.

"We have to go back. Alex has a broken arm, and Livia can't walk."

"Amber," Alex's good hand was on her shoulder. "We can ride. Going on is the only option. We have to. No one else has the knowledge we do, and can reach here in time. As soon as the rabbit is done, we will sleep a few hours."

"Livia will need help."

"Corbo will help her up on the horse. She doesn't need her ankle to ride. She'll be more comfortable up there anyway."

"Rabbit's done," Corbo said.

Amber's eyes watered as she separated the rabbit and dished out the beans. Only a snack for five people. It was far more than they had before. It might be more than they would have for a while to come.

Chapter 29

Magdalena Peak, New Mexico

Amber's phone buzzed her awake. She lifted her head from Alex's arm and reached for her phone.

"Hi Mom. We're safe for the moment."

"You sure? That was a 6.9 last night."

Amber gulped. She knew it had been bad.

"There's more news," her mom said.

"Is Brandon okay?"

"He's fine. Dr. Rebecca said to tell you Livia's friends and a few hundred scared people marched on the Santa Fe courthouse last night. They scattered as the quake hit."

Amber groaned. So that's where Josie called from. No wonder she had been so worked up. Thankfully, she had no idea where Amber, Alex, Livia, and Corbo were, or she would have tracked them down as they slept. If the roads were passable.

"Thanks Mom. Will call you in a few hours."

In the light from her phone, and the fire's dying embers, Guide's eyes blazed. Who could he be, and why was he here?

She shook Alex awake.

He stirred the embers to warm the leftover rabbit bits. Roasted rabbit had been a good meal. No one knew when, or where, the next meal would come. Her stomach churned.

Breakfast was a silent meal as the sun leaked through the steam above them.

Corbo helped Livia on her horse and led them away from the campsite.

At least Livia hadn't complained this morning when Amber checked her ankle. A few aspirin were all she had left in the first aid kit. They would have to do for Livia until they reached help.

When Guide realized two were all she had, he had refused even one.

"It's okay for me to be in pain. I'll be gone soon. Livia and Alex need them more than me."

Alex looked away as well. "Save mine for Livia."

Amber turned on Fortune's back one last time to be sure Guide was okay.

They had left him resting beside the burned out fire, at his request. He hadn't moved.

Dawn's rays blinked colorfully through the smoky haze from the top of Magdalena Peak. Brush covered the trail they had followed the evening before.

If the scene weren't so deadly, it would be beautiful. Fault lines and a napping volcano slumbered beneath their feet. Social faults rifted in the capital city. Her mom and Dr. Rebecca depended on her and Alex to call back with data soon.

Amber rode up beside Alex.

"Are you sure you can ride with one hand?"

He lifted his right arm, which held the reins. "Sure, one hand is all I need. The other can rest. These horses are gentle."

They reached the ravine and searched for a trail through the brush.

Bushes rustled behind her.

Guide groaned.

"Don't look back. Whoever he is, he doesn't want us to know. Don't worry. I think he is safe. We have a job ahead of us." Alex leaned forward and searched for a path through the desolation.

Amber held on tight as her horse stumbled down the trail through the ravine.

Fortune side stepped, and slid before she reached the bottom. She stopped Fortune for a moment to examine a rock formation with her flashlight. The group ahead of her moved out of sight along the trail, so she urged her horse to follow.

Corbo led them through the scrub brush, stopping occasionally to verify they were pointed in the correct direction.

Alex's phone chimed.

The tune in the early morning air reminded Amber of church clocks in the city.

Alex pulled his phone out. "Hi Dad. Sure. We're okay."

Amber snorted. They were far from fine.

"Glad Tom made it home safe." Alex glared at Amber.

"The event last night was bad. Think it was nearby. We should be at the peak in an hour or so." Alex listened, sitting as still as he could. "Sure Dad. We will call you as soon as we arrive."

Alex ended the call. "Your mom called my dad to update him. They aren't sure if it is a new fault, or a previously undetected fault. The results from the volcano monitoring are coming in. Our work, and Dr. Rebecca's students, will make a difference."

"It's not good ahead." Corbo pointed at the trail of smoke they had been riding toward.

"The smoke cloud is getting thicker. We are risking our lives. Someone has to do it. Can you contact Brandon, or Dr. Evan, for an update before we trudge onward? We need a water break anyway." He reached for his backpack to find a water bottle.

Amber called Brandon. Her signal was weak here, though Alex's call had come through. "Hi Brandon. Don't ask questions. No time. What's your update?"

"Amber, are you safe?"

"Yes."

"More gas worries. That event last night caused a massive explosion in one of the mines. A whole section collapsed. May have to move the canaries somewhere else, or we may lose them."

Amber laughed. "At least they aren't real canaries. Which gasses?"

Brandon relayed the gasses released at the mines, and their concentrations. "They aren't quite the expected type for earthquakes."

"Can you repeat the list to Alex?"

"Sure."

Amber rode up beside Alex and handed him her phone. She waited while Alex listened.

"Thanks Brandon. We have to go. We are way behind schedule here. There may not be enough time." He flipped the phone closed, and handed it to Amber. "Corbo, lead us as fast as you can!"

Something crashed in the ravine behind them.

Amber turned Fortune to check. The movement jerked her head. Nothing visible. She raced off to catch up with Livia at the back of the line.

The horses trotted through the rough terrain. Here the trail didn't have much brush over it. One fallen stump was cleared in jumper style by the horses.

Livia groaned each time they swerved on a curve.

The hill they climbed was steeper than she expected from the picture on her map. Evidence of recent landslides littered the hill and valleys below. A few rocks tumbled as they passed a dry stream bed.

The column of smoke thickened, and edged closer.

Alex caught up with Corbo. They talked quietly.

Livia rode beside Amber. Her face was pale. Though she hadn't complained about the pain.

"How is your ankle?"

"The wrap is okay. Not too tight. Thanks for your help."

Alex turned to her. "Amber, you and Livia stay here. Corbo and I are going on. Be back in a few minutes." He pulled a small COSPEC from his pack.

"Alex, I want to go too."

"It's too dangerous for four. We would be in each other's way. Please, wait here, and be ready to go back to camp as soon as possible." Alex handed her his pack. "Keep it here."

"You'll need it." Amber pushed it back.

Alex shook his head. "I might drop it. It has all the equipment I have left. If we don't return quickly, or the volcano erupts, go back to camp."

To stand on an active volcano would be the dream of a lifetime, though, a nightmare as well. If the ground shifted, they might fall. If the volcano had an open caldera, one of the team might die.

"Okay, how far back?" Her shoulders slumped.

"The last clump of trees. We will be back in a few minutes. It won't take long to look, and take a reading." Alex led off with Corbo close behind.

She grabbed the bridle on Livia's horse, and turned her around. As soon as the men were out of sight, they walked to the clump of trees and waited.

The minutes seemed to drag on.

Twigs snapped around her.

Amber hoped they were squirrels and nothing more. Squirrels might not even naturally live in New Mexico. Maybe they were prairie dogs? She stifled a giggle that she knew more about the earthquake faults in the state than the current wildlife population.

The horses scattered pebbles and galloped back into view.

Alex raced downhill ahead of Corbo. They slowed down. "Let's go. Back to the camp. We'll tell you what we saw then."

The ride back was much quicker than the ride up the hillside had been. The trail swerved through the fallen brush. When they reached the ravine, Alex led them to the left before descending swiftly to the bottom. He stopped a moment for Amber to glance at the damage done by the recent events. Then, they urged the horses up and out on the other side. In a few moments, they were back at their campsite.

Guide was nowhere to be seen.

Amber slid off her horse and tied her up to the brush. The lead was long enough that the horse could reach good grass.

Corbo helped Livia.

Amber glanced at the ashes of the campfire. "Someone has been here."

In the ashes were a few cans of beans and nuts. Not much. It was a meal, more than they had.

"Guide's friends left us food. That's good," Livia said.

"I hope he is okay." Amber opened a can of beans, pulled a camp spoon out of her pack, ate few bites, and passed it around. An explosive lunch, like the peak above them.

Alex laughed. "He is plenty strong. He'll be fine." He fished the rest of cans out of the ashes, and placed them at his side.

"The gas meter registered similar to Brandon's did in the mines. It may not recognize a few he listed for us, being a smaller portable unit. The volcano's caldera looks like an open sore. It isn't oozing lava out the top. Below the surface, magma bubbles a few feet down. The heat seeped through the ground under my feet. It's dangerous to remain here for long."

He took a twig and twirled it. "So, what to do? We are about half a mile from the main trail. No tourists are out here, thankfully. A few minutes back to the road."

"What would your dad say?" Amber asked.

Alex nodded. "Time to report in." He pulled out his phone and called.

"Dad, what are the deformation stats?" Alex paused a moment. "Hot ground under foot. Open caldera with visible magma. Lots of steam."

Alex recited the gases he and Brandon had measured.

Amber grabbed the food cans to stuff them in her backpack.

A tremor wafted through the ground. It lasted a few seconds. Limbs shook, and a few loose ones fell. As the ground settled, a loud crash sounded in the direction of the ravine.

The boulder she had seen at the top of the ravine must have fallen. If it fell in one direction, it would stretch across the trail they had followed up the mountain not long ago. She shuddered.

Alex closed his phone and turned to the group. "Dad says the deformations are bad. The peak has risen at least two feet in two days according to GPS satellites. We have to hurry."

"The horses can't run fast enough," Livia said. "We will never make it to safety in time."

Amber shook Fortune's blanket out, and settled it on her back. It would be a long ride.

Alex shifted his pack on his back as he settled on his horse. "We'll ride back to the road and hope. We have to reach both the Jornada del Muerto basin and the northern San Andres fault near the Trinity site."

"The basin is on the base. It's well guarded by cameras and fences." Corbo said.

Alex turned to him. "We will have to try. We may have to split up."

"That is three days' travel by horseback, at least ninety miles any way we can go. Even pushing them, two days wouldn't be enough. We have enough food for two meals," Livia groaned.

"One step at a time Livia. Let's ride to the road, and across it first." Alex turned his horse toward the road.

Amber followed. She pulled out her phone to call her mom. "Mom, please. Are you okay?"

"Yes, are you?"

"Fine. I'm worried."

"Dr. Rebecca has run the reports you recommended. We still need to check a few more things. There will be another meeting soon. General Nord won't see us until then, especially with the march going on."

"Wish it would end so they could focus on the real problems."

"I know. Stay safe."

Amber closed her phone. Her mom would do what she could. Amber had been right, at least. Only now, more problems had been added.

Alex peeked through the bushes by the road. He let out a low whistle. "Stay here, and don't make a sound."

He slid off his horse and walked forward.

A few minutes later, Alex returned smiling.

"Off, and quiet. Lead the horses, one person at a time and follow me. No questions."

Amber slid down and took Fortune's reins. She glanced out through the bushes, and watched as Alex led his horse to the trailer they had ridden in the night before. As soon as he and his horse were in the trailer, she glanced up and down the road. No traffic, so she pulled the reins; and hurried across the road, and into the trailer herself.

Inside, she and Fortune hurried to Alex and his horse.

Alex tied the horse up.

Champ, Windy's silent friend, held up his finger for silence; and motioned Amber forward to the small section closest to the truck. Amber glanced back as Livia on her horse came into the trailer. She walked forward to sit beside Alex on a hay bale.

Corbo arrived and tied up his horse. He took Livia's hand, helped her down, and carried her towards the hay bales.

Champ closed the rear doors and returned with his phone in his hand. "A few minutes."

Amber rolled a few pieces of hay in her hands as they waited.

A vehicle passed.

Silence greeted them. Inside the trailer, the heat stifled them. Sweat trickled down her neck.

The next vehicle stopped and the door opened and closed. It sped off.

The back door slid open.

Windy stepped around the horses. She nodded to them. "Good news. Guide will be fine thanks to the good care you gave him. You treated my brother well. Alex, let me look at your arm."

Alex held out his left arm and sling for her to see.

"Not perfect, has it slipped some?" Windy touched the bandages and sticks holding his arm together.

He winced and nodded.

"Brave soul. Good." Windy turned to Livia. "Let me see your ankle."

Livia stretched out her right leg and winced. "It's not easy to stretch out."

"Sit on the double stack and let it dangle a few minutes," Windy said.

Livia struggled to stand up.

Corbo picked her up, and placed her on top of the hay bales.

Windy gently took Livia's right ankle in her hand. She unrolled the wrappings and held her hands on the red, swollen area.

Livia gasped, and pulled back.

Windy looked up at her, rewrapped her foot, and glanced at Amber. "You would make a good trail nurse. Thank you. Alex, in a few words, what did you see at the peak?"

"The ground was hot beneath my feet, a fresh caldera in the ground about the size of a dinner table, with visible magma. A few fissures developed off in the distance. I didn't take the time, or risk further injury, to check them out. Too much steam, and too many dangerous gas emissions, to stay long."

"Good report. Two of you need medical care."

"My dad says we don't have much time. The horses aren't fast enough for us to reach where we need to go in time."

"First, is medical care."

"We have to check Jornada del Muerto. We have no money for medical care." Alex said.

Livia laughed. "That is doable. There are plenty of legit clinics for those without money. Good medical care too, and the doctors don't ask questions. Unless, they recognize you from a wanted poster."

Windy nodded. "First the clinic. One is near the Jornada del Muerto basin. Then, we will see. Stay quiet back here. Corbo, Livia may want to be on the floor so she doesn't fall, as we go around turns. See you in about an hour." Windy patted each of the horses, as she and Champ went out.

The truck doors slammed and the engine started.

Amber snuggled closer to Alex. "I want your arm to heal right. You will need it the rest of your life."

He put his good arm around her, as they turned a corner on the road.

"Windy knew where we needed to go. I think she has had people following us, and watching, and not just her brother."

"She had to be sure we were who we said we were," Livia said. "And doing what we said we were doing. She's not one of my group. I don't know what group she is part of."

"We don't know who they actually are, or what they're really doing," Amber said.

"Do we need to know?" Corbo asked.

Amber relaxed. Sure, they wanted to know. These people probably weren't doing anything illegal. They were trying to keep from being hurt again by the descendants of those who had hurt them so many times before. Not sharing until, and unless, they had to. Windy taking time, gas money, and food, out of her pocket to help them was a blessing, and she couldn't complain.

Chapter 30

Immi Clinic, New Mexico

Alex leaned against the trailer wall.

Amber snuggled up to his shoulder.

She had done the best she could. Windy knew what was good trail medicine. He'd almost forgo the doctor visit if he was sure the break would heal on its own. Doctors would be swamped with more urgent emergencies than his. Livia definitely needed a doctor if she was to walk normally again.

The trailer stopped. The door opened, and Windy came in. "Try not to use your real names. I'll be in the waiting room when you come out. Don't come outside until then."

Alex waited until Corbo helped Livia stand up. She was having trouble with her leg, though she did her best not to show it.

Windy did not close the trailer door behind him.

A sign above the door on the adobe building. "Adobe House" in large letters. On the door, a taped paper sign hung with "Immi Clinic" in green.

Corbo grunted.

Amber opened the door.

Corbo helped Livia in.

An antiseptic odor wafted out over their heads.

A mass of adults, teens, and children milled around. Voices echoed as mothers admonished toddlers who chased each other under and around the legs of chatting adults.

A long wait could be dangerous, especially for Livia.

Corbo picked up and carried Livia so no child would knock her down.

They moved along the wall, trying to figure out where to go. There appeared to be no available seating in the room, and no reception desk.

A woman carrying a clipboard walked up to them. "How many?"

"Two," Alex said. "Broken arm, and twisted or broken ankle." He pointed to Livia.

The woman checked off her clipboard. "Right. This way to x-ray."

Children and adults parted so they could pass. "Don't worry. Most of these are worried family members."

The woman stopped at a dingy door, and opened it, waving at Alex and Livia. "Here you go, both of you right through this door. You two," she waved towards Corbo and Amber, "please wait out here."

Alex squeezed Amber's hand.

Corbo sat Livia down carefully.

Amber handed her walking stick to her.

Livia hopped through the door.

The woman handed Alex a paper to fill out. The pen was one of those cheap giveaways that businesses hand out to remind people they exist.

He walked into the room and leaned up against the wall to fill in the forms for him and Livia.

The form's name line was marked out. Only gender, current issue, and other health problems had empty spaces.

A few people waited on wooden benches in the smaller room. Another woman walked up, looked at the paper, and helped Livia into a darker closet, deeper into the building.

Time crept by as Alex ignored the pain in his arm, and conversations in Spanish he could not understand.

Livia hobbled back out.

"We have to wait here until they read the results," she said.

Alex took his turn in x-ray. A gurney and chest x-ray machine took up all the available closet space. The technician stood in a cabinet barely large enough to turn around in.

He returned to the waiting area to see Livia on chair with her leg propped on a bucket full of rags. "You okay?"

"Yeah. Be glad for it to be set."

One by one, a nurse called the other people. They all answered to some variant of "John," or "Jane."

A little boy with a bloody leg sat nearby on a man's lap.

"Don't forget, Johnny, don't forget," the man said.

The boy nodded, rubbed his eyes, and leaned against the man.

The man patted his back. "It'll be okay. I broke my leg when I was a bit older than you."

"Wanna run again." The boy looked up into the older man's eyes.

"You will. It'll be a while. You'll be chasing your younger sister and the chickens next spring."

The child nodded and leaned closer to the man, closing his eyes.

Running mattered to all children. Even a child couldn't outrun the quakes. Events of today hurt everyone, regardless of age, or infirmity. The older man probably wished it had been him instead of the child.

"Was it the quake?" Alex asked the older man.

He nodded. "My son and daughter-in-law left my grandson to keep me company. He went for my water bucket, and a beam fell on his leg. If it had hit me, it would have been far worse."

The man meant he wouldn't have survived. Even here, speaking of death didn't occur openly. Or maybe the man felt he wouldn't understand such openness.

The technician came for the boy.

The older man stood up and walked to Alex. "How many died?"

Alex nodded. "I don't know. I wish I did."

"You look like you should know."

I should have asked my dad. "We've been collecting geographical data to save as many lives as we can. Until then, no one will listen."

"Listening." The man looked at him eagerly.

Alex looked around at the other people.

Silence had descended as he and the man talked.

He shook his head. No words could explain the situation.

The old man's shoulders slumped. He sat back down.

The nurse returned with the boy and patted Livia's shoulder. "You need a good wrap for that bad sprain Janey," she said.

Livia winced as she stood.

Alex helped her steady herself.

He waited, wishing there was something he could say to this man, and the others waiting in the room. Even if he did tell them the truth, where would they go? And, how would they go anywhere their feet couldn't take them? There must have been over two hundred people in the building, and less than twenty vehicles in the parking lot.

Another nurse returned for him. "Okay John, come this way. Your arm is rather bad. Your friend did a good job."

Alex followed, not asking any questions as Windy requested. What a way to save on paperwork, and protect identities. I wish I could give them my real name, and let my insurance pay them. The doctor set his arm. I'll have to find a way to send a donation when we are back home. That is, he winced as they wrapped the cast on his arm, if we ever are. Exploring active volcanoes and fault lines can be dangerous work.

After the plaster cast set, the nurse pointed him back out the door to where Livia, now on crutches, leaned against Corbo, and Amber waited on him. Glad to see his friends, he raised his wrapped arm. "You did a good job, they said."

Amber laughed and hugged him.

"Windy isn't back. Let's go stand near the door," Corbo said.

They moved through the mass of people. More doors led off in different directions. Different ailments were taken care of in different places. A far better, quicker, and safer idea than most places where contagious, and not, were thrown together.

"Which is the door that leads out?"

"I think, it's the one with the blue bowl over it," Livia said. "Blue signifies sky."

"Logical," Alex said. "Are those crutches helpful?"

"Sure are. At least, they will be when I'm used to them, and don't have to tangle with a forest of legs and running toddlers. I'm not complaining though."

"Better get used to it," Corbo said. "Out there is a real forest of boulders; and it will be even tougher."

"I know." Livia avoided a running toddler with her right crutch.

"Corbo?"

Alex turned to a woman who bore some resemblance to Corbo.

Corbo glanced at her. "Mom. What are you doing here?"

"Your dad was hurt. He was fixing a fence when the last quake hit. It fell on him. They are doing surgery." She wrung her hands.

Amber grabbed Alex's hand.

"Um. Mom, this is Livia. She and I are together."

The woman frowned. "Can we go outside and talk?"

Corbo shook his head. "No Mom. We are waiting on Windy."

"I'm here Corbo. Bring her with you." Windy stood near the door.

"We didn't hear you come in," Alex said.

She laughed. "As loud as it is in here, how can you hear anyone more than a few feet away? Come on."

Corbo helped Livia to the door, and outside.

Alex followed with Amber at his side.

Windy led them around the corner of the building, walking at a comfortable pace for Livia to adjust to crutches. A corral with dozens of horses covered the back of the building.

Windy turned to them. "Your horses have been let lose in the corral to refresh themselves. Let's go sit in the shade of the trailer over there."

They followed her to a trailer close to the one they had ridden in before. Windy brought out a folding canvas chair for Livia, while the rest sat on the ground. Windy turned to the new woman. "Tell us."

Shadows glanced across the face of the woman who was Corbo's aunt, not his mother, at least according to Livia's mom.

The woman sighed. Her hands fell into her lap. She looked up at Corbo, and feebly reached out. "Corbo, please forgive me. I always hoped."

A sob slipped out. "I tried. I wanted what was right. We didn't know so much. You are missed. Please come home."

Livia patted Corbo's hand. "Don't make her suffer."

Alex reached over to her. "Please don't."

She wiped her eyes.

Corbo's fists were clenched as he stared at the woman. "I know you aren't my real mom, and that your husband isn't my real dad. Why didn't you raise me as your full son, rather than as an unwanted nephew who you called son?"

Corbo's Aunt Anna burst into tears.

Livia glared at Corbo.

"Please, tell us your side of the story," Amber said.

She wiped her eyes and smiled at Amber.

Windy handed her a water bottle.

She drank some water. "Corbo, we hoped Eduardo would find us. We don't know if he is alive, or not."

"What happened that day? The day of the skirmish," Livia said.

The woman looked into the sky, far away. Her voice came, as if from outside her. "Jon, Adora, and I didn't make it to the border that day. We were late." Her hand shook. The water in the bottle sloshed.

"Corbo came early, the night before. We were a day's journey away." She closed her eyes.

"Adora was not fit to travel for three days. Jon watched to see if Eduardo would come looking for us. He didn't find him. We heard about the skirmish, and had no way to know if Eduardo was there. We tried to send a letter to his last known address."

"I don't think it made it there," Livia said. "Mom would have opened it if it had. She would have told us."

The woman nodded. "It is possible, as the letter had to pass through several hands before it reached the post office. We checked back monthly with family, and no one has ever received a letter from him. We keep hoping." She sobbed, gently this time, as Amber held her close.

"Why did you never tell me? What happened to my mother?" Corbo was still as a stone, not allowing emotion to show on his face, or body.

She wrung her hands in her lap, and took another sip of water. "Your mom died a few months later, from a broken heart we think. She loved your dad so much. Everyone who ever met him loved him. That's why she fell in love with him when she met him on the reservation. We tried to tell you once, and then changed our minds. We decided to raise you as we did, and never tell you the truth until your father was found."

"I wish you hadn't. I never knew who I was. I don't even have a driver's license." Corbo clenched his hands and his voice deepened.

The woman's water bottle shook. "Our papers are lost too. We have no idea where they are. Eduardo must have died somewhere; holding the papers, and maybe the letter telling of your birth. If he was hurt in that skirmish, he may have died in a hospital, or clinic like the one behind us."

"Did you ever go to them, and try to find him?"

"No, Corbo, we were too scared. We didn't know where to go, or who to talk to after Adora died." Her hands shook as she tried to reach out for the man she had wronged.

Corbo backed away.

"You raised Corbo so differently than your own kids. Why didn't you go back?" Livia asked.

"My children were born here, so they have birth certificates. Corbo wasn't. Though his parents wanted him to be. The border was a day's walk further when he was born. We didn't know where to go when we came to this country without Eduardo. We wandered a long time. By the time we found someone who could have helped us verify Corbo's birth certificate; Adora was dead and couldn't give the necessary information. It was too late."

Windy nodded. "So you made a lot of mistakes?"

"We made many mistakes. Once we had children in the country, the authorities were less likely to send us back. We moved a lot, so no one would find out the truth. I am sorry Corbo, please forgive me." She reached her arms out, begging the man she had raised, and wronged.

Tears glistened on his cheeks. "You can never repair the damage. Where did my mother die? Where is she buried? I want to find where my father died," Corbo said.

His aunt nodded. "Your mother would be proud of you for striking out on your own. She was so independent. That's why she worked on the reservation part time. If she had lived, she would have contacted them for help."

His Aunt Anna took a sip of water. "Eduardo was supposed to be there, where the skirmish was. He was supposed to meet us, and bring all of us to his job at the university. He had our papers. Could the government have seized them, thinking the papers were fakes?"

Windy nodded. "Could be. They might not have even believed he was who he said he was. They might not have believed his own driver's license photo if he had other people's identification with him."

"Wouldn't they have tried to contact the people? Livia's mom for instance, who would have known him." Alex said.

"Nope," Windy said. "Not necessarily. If he died, they would have buried him; another causality of the border wars. If he lived, they may not have used his real name. He might be held with a generic name, and he may be languishing in federal prison on false document and smuggling illegal immigrants into the country charges."

"That wouldn't fit protocol, would it?" Alex said.

"No, Alex." Windy said. "Do you think I believe protocol? If it was always followed, where would I be living?"

That was true. Written rules were one thing. When challenged, they had to be followed. However, unspoken policies tended to rule many things, and were rarely challenged. "Where would you be Windy? We don't even know."

"I wouldn't exist. My ancestors belong to many tribes that would never have met. Some were at war with one another, before being forced to live on the same reservation."

Windy reached her hand out to Corbo's knee. "Though I don't know his exact heritage either; I can guarantee he wouldn't be facing this problem, if protocol were followed every time, as it should be."

"Corbo, please forgive me," the woman said.

"You never let me learn Spanish. You kept my culture from me!" He slammed his fist on the ground.

His aunt rubbed her eyes. "Corbo, we wanted more for you. Your dad, he wasn't Spanish. We hoped you could find your real heritage."

"Who was he?" Corbo took her hand.

She wiped her eyes.

Corbo glared at her. "I won't call you 'Mom' anymore. I don't even know what to call you. Do your sons and daughters know who I am?"

She sighed. "After you disappeared, we begged them to look for you. Finally, a year ago, we told them the truth. As I have told you."

Her hands twisted in her lap. "Desi was upset. He was gone a month looking for you. He said he found you. And you were safe, though he never spoke to you. He refused to tell us anything about where you were. He goes once every few months to check on you. He won't tell us where."

"Desi liked me best." Corbo smiled. "I haven't seen him. That means nothing. He is an excellent tracker, and good at hiding."

"That is what he said."

A nurse came around the trailer. "Miss Jane, John is now out of surgery."

Everyone laughed at how close to right she was.

Corbo's "Mom" tried to stand up.

Corbo offered her his hand. "I will walk inside with you. Livia needs me; and so do Alex and Amber."

Livia patted his hand.

His aunt nodded and followed the nurse back to the building.

Livia sighed. "I hope he can find peace now."

"Not until he finds his father," Alex said.

Windy handed out water bottles and snacks. "We wait until Corbo comes back. Livia, would you have gone with him if your ankle weren't wrapped?"

"No, he needs to talk to her alone without interruptions at this point. He knows I'm here for him."

Windy smiled and sat back, eating a piece of beef jerky.

Chapter 31

Immi Clinic and Jornada del Muerto Basin, New Mexico

Amber plucked at the dead grass at her feet. She tossed a pebble at the chair Livia sat in.

Livia turned to her. "What are you thinking?"

Amber sighed. "I understand what he's going through, kinda."

She glanced over at Windy. "If my dad ever came back, I wouldn't know him. I miss him. All of our pictures of him were lost in a fire. I don't even know what he looks like."

"How old were you when you last saw him?" Alex asked.

"We've known Karen and Brandon for twelve years. We all went on a trip together, and dad disappeared. Karen's mom died a year later, so I guess I was six or seven when he disappeared in South America."

She piled a group of gravel into a pyramid. "Not much hope of his returning, especially now."

Windy handed her a stick.

Amber placed it on the ground and gently covered it with gravel.

"I hope Corbo finds his dad," Amber said.

Windy nodded.

Alex finished his water and leaned against the side of the trailer.

"I'm back." Corbo walked into the circle.

"Is your 'Dad' okay?" Livia said.

Corbo winced. "I know. I've called him 'Dad' for eighteen years. Guess a little longer, until I decide what to call them, won't hurt."

He grabbed the water bottle Windy handed him. "He will be okay. Won't be repairing fences for a while. It'll be hard on them. They depend on him doing lots of heavy work." He tossed a handful of nuts in his mouth.

"I wish we could help them," Livia said. "Maybe he has information that your 'Mom' doesn't know."

"Not likely. He might be able to tell me what she thought of my parents. Windy, what do we do now? You put our horses in the corral."

"Don't worry about your former parents Corbo. They won't starve. Your cousins are adults, or almost, now right?" Windy said.

He nodded while chewing beef jerky.

"Where you want to go, horses are too slow. Not that there is enough time anyway. A horse isn't safe in that terrain. I wouldn't want a lovely animal hurt, or shot."

Alex gulped and pulled Amber close with his good arm.

"I don't want you all hurt either. I have a plan. It will be dangerous, and extremely difficult. Much faster and safer than horses."

Amber shivered. "Why are you helping us? What do you want us to do for you?" She'd help, if she could.

Windy softened, looking more feminine than before, a smile in eyes. "Yes Amber, I do want something. As all of my people do. We want to know the cause. We don't believe the military is completely to blame. And, if the military is forced to pull out; perhaps we can take more of our land back, caring for it the way a good guardian does."

"Your reservation, what we saw, didn't seem overcrowded. Do you think they would give the land back to you?" Amber really wanted to know. After all, land should belong to everyone, not to one group of people. A world at peace with itself, and those in it would be relaxing. Time spent traveling, learning. Limited resources would be less limited, as more people created.

"They would give it to us. The least desirable people in their eyes, to ranch, and watch. Our potential deaths wouldn't matter to them. We could bring the land back to life and make it safe once again. While the area you explored looked under populated, that is because most of our people live in clusters, or off the reservation, trying to make a living in the modern way."

Windy waved her arms. "Look around you. What do you see? This vast semi-desert expanse cannot support many people. It takes acres and acres to support the cattle and sheep that feed our hungry children in the villages. They crowd together so that the animals, the people's food, have more forage to eat, and can better grow into healthy meat. Which means our children are almost as divorced from their food as other modern children. They see the cows, sheep, goats, and pigs a few times a year at ranch events."

Amber nodded. Windy knew. Just because Amber knew what the land needed, didn't mean lots of other people did too. Like the materialistic kids she had known in public school. They wouldn't know how to survive out here in the desert. Livia was only a little better. And only, because she had lived here all her life.

"You want us to go to the base?" Alex asked.

"I want you to find out what you can. Check for recent nuclear testing sites." Windy handed them a brochure with known testing sites marked on it.

"Find out what is happening to the Jornada del Muerto basin, and in the Northern San Andres Fault. Can you do that?" She watched him closely.

"On foot?" Alex asked.

Windy beckoned and walked to the trailer. She pulled the doors open.

Amber peered in.

Behind the doors were the two four-wheelers that had been on her ranch days before. The first one was a mud splattered dark green. It didn't look dangerous. Rain would be a problem. At least they wouldn't have to worry about feeding and watering the vehicles. Speed, and distance, would increase greatly.

Alex gulped. "On those? I've never driven one before."

Amber jumped up. Maybe I'll have a chance to learn to drive. Mom promised I could this year. I never needed to learn before. The new driver's training laws had made learning while in school next to impossible. Who could learn to drive in daylight only, when they were in school from sun up to sun down?

Windy laughed. "Relax. What you need to know is; you have a four-gallon tank, so you should have 80 to 100 miles of fuel. About fifty miles from here, if the land was flat, is the San Andres fault deep in the White Sands Military Base. You will need two tanks, so a five-gallon side tank of gas is provided. Try to keep the speed low, around 30 miles per hour, and watch the ground. The four wheelers are safe and can handle rough ground. Be careful."

"That's a lot of miles," Amber said.

"Can we reach the base from here?" Alex glanced at her.

Windy nodded. "I'll show Amber where to go through the fence, while you and Corbo drive out your new transportation."

Windy handed him a key and walked over to Amber.

Alex stepped into the trailer.

"Can you drive with one arm?" Amber asked.

Alex nodded. "I think I can. Guess I'll find out."

He climbed onto the first four-wheeler.

Corbo set out the ramps for him and Alex to back down.

He pulled around and waited while Windy and Amber talked.

"Across the plain is the Jornada del Muerto lava flow and volcano. Be careful there. Follow the flows until you reach a lava cave. It was built by some of our ancestors." Windy marked the cave and the path on the brochure.

"A mile or so beyond is the fence. Antelope and deer have knocked the weakened fence over in the last few quakes trying to escape. Cross carefully. This area has no cameras, as it isn't a typical access point."

Amber nodded.

"Alex and Corbo will pick up the path from there. Trails may have cameras at intersections. Stay safe and careful. You can do this."

Amber gulped. "Sure it's safe?"

Windy handed her the brochure. "We'll be watching you at all times. Keep your phone off from the time you reach the base until you return."

Windy shook her hand.

Amber ran over to Alex, and climbed on behind, holding onto his waist. Chills streamed up and down her spine.

Corbo drove up beside him and parked. He walked over to help Livia up.

Windy folded up the chair, and as Corbo helped Livia on, she strapped it to the front of his luggage area between the gas can and her. She pulled four helmets out of the trailer and handed them around.

"Good luck. Come back here when you have news. Champ will be here caring for the horses. He often does." She stepped back, and the wind grabbed a wisp of her hair.

Alex took the trail toward the basin. "Amber, you'll have to give me directions."

Amber nodded as she pulled the helmet on. She hugged him and pulled to the right.

The terrain grew more difficult. Stream tracks of millennia old lava broke the landscape into more of a moonscape. Their route went over dips and rises, almost ruts as the dried lava streams became larger.

Alien lava fields reminded Amber of the moon. Little grew here. Sweat trickled down her back. Off in the distance was one of the landmarks Windy had mentioned.

Amber pulled back on Alex, and pushed her knees against his legs.

He stopped and Corbo pulled up beside them.

Amber let go.

"That'll take some getting used to." She hopped down. She pulled her pack around and opened it, looking for something. "We need to stop here a few minutes and look. Plenty of time. A cave hollowed out of lava rocks nearby will protect us until nightfall."

"Will we be traveling in the dark?" Alex asked.

"Yes."

"Won't we need to turn our lights on?"

She looked up as she pulled out her tiny hammer and chisel. "If we need to. The moon should be bright. Come on Alex, we can chip a few spots of lava rock here, and go down, and see if it's the same. We may not be able to scientifically compare the composition. However, a field comparison is good."

"What about Corbo and Livia?"

"They can wait on us, or go on ahead. We won't go far. Corbo, across the field that way." She pointed. "Is the lava hut. It is close to the edge of the field here, and as close to the service road as we dare go until dark."

"Okay, Livia needs to be out of the sun anyway." Corbo started his vehicle up, and drove on in the direction Amber indicated.

Amber squatted, watching them go on. Once they drove out of sight; she sighed, and chipped at the rock. "Come on, you're the expert," she said.

He stepped down. "Why did you send them on?"

Setting the hammer on the rock, she looked up to him and said, "Alex, they are a couple, have been for a while. They have had almost no alone time together for five days. Corbo has gone through a stressful time."

She tapped a rock. "Right now, their relationship is as shaky as the ground we are standing on. We are all in this geologic mess together. They don't consider us friends. And they need to talk now, without us. Even if they do give us a summary later." She turned back to her work.

Alex squatted down and examined the lava. "Where is the main caldera here? I think I should have asked Dad what type of deformation was going on here."

Amber pointed southeast of where Corbo had gone. "It's over there. Let's go." She dropped the pieces she had chipped off into a plastic bag, and pushed it back into her pack.

There was no trail. It lay to the south. Soon, they reached the opening to the ancient caldera. The steep walls towered on either side. This would not be a good place to be if the lava started to flow. Walls would hold some of the lava from the main fields, for a while. They might escape if they were lucky.

When they reached the point where the corridor opened into the caldera, Alex stopped, turned the four-wheeler around, and parked.

Amber hopped off, and reached down to feel the ground. She frowned and stepped forward.

Chapter 32

Jornada del Muerto Basin, New Mexico

Alex stared at the crater of dried lava. Jornada del Muerto was shield volcano, like those in Hawaii. The look and texture showed that serious trouble would be brewing if this volcano awoke unexpectedly from its slumber. If new lava tubes formed, and no one realized it, an explorer could pop one open by stepping in it, and die from burns.

Few plants had grown on the lava here. Unlike on Hawaii, where plant growth would recover in the cooled lava fields within a year or two. Of course, the lack of water here was partly to blame as well.

Alex had left his pole at the base, and regretted it. It would be difficult to determine if the ground was solid beneath them. The walking stick he had picked up by the creek side had been forgotten somewhere as well. With only one arm, he'd have to be careful. He didn't want to sit down, and have trouble standing back up.

Amber walked forward, then stopped to chip off a lava sample. Comparing it with her previous sample, they looked similar to the untrained eye.

To Alex, there was a good deal of visible change in the dried lava's composition. Alex bent over to look at the area where Amber was working.

She turned her head up inches from his face.

He flushed and stepped back. She could be thinking anything. He had agreed to take care of her, and he liked her, more every day. It seemed too soon, and too much to ask, since she was several years younger than him. Come to think of it, he didn't even know her exact age. If she was underage, he could be in serious trouble, no matter what he did, or didn't do. Not that she seemed like the type of person to say or do anything, one could never be too careful.

He staggered backward, and almost fell. His arms flailed. Ancient jagged lava caught his feet. His good arm grabbed a boulder.

Amber covered her mouth, to hide her laughter, though it shone in her eyes. "You didn't have to jump back. I don't bite."

"Sorry. A fear crossed my mind."

She took his hand. "Do I remind you of your mom?"

He swayed. Sure she did, in some ways. Not in so many others. "No Amber, not really. You are independent like she was."

He turned around to face her, and rested one arm on her shoulder. "Look, what my fear is. Guess we need to set a few records straight. You are eighteen, right?"

She looked at the ground and shuffled her toe. Glancing back up she said, "Does it matter?"

Alex sighed. "It shouldn't. I am sure we are both of a biological age of consent. Society has other opinions. A friend of mine." His voice trailed off.

He shook his head and closed his eyes. A high school friend had ended up in court, and jail, with a baby to support. He'd only been a few months older than his girlfriend. Barely eighteen when she, at seventeen announced she was pregnant. Sure, the grandmother regretted it now, that her son-in-law would never be able to legally work and support his wife and child. "I don't want that to happen to me. I don't want you, or your mom, to take something out of context, now, or later."

Amber put her hand on his hand, and removed it from her shoulder. "Not to play with your feelings. I kinda enjoy being able to pretend you are my knight protecting me from harm. I'm not far off from legal age. And am far more mature than the kids I go to school with. Or, is that went to school with? Since I have no idea what my assignments are these days."

Alex laughed. "Some knight I am. I'm the one with the broken arm."

"Easy for me to escape unwanted attention then. Of course, maybe I'm not worried." Amber giggled and play slapped his good arm.

Alex took the ignition key and dangled it. "I hold the keys."

"To the four-wheeler, or my heart?" Amber grabbed the keys and ran.

Alex followed laughing.

The ground began to shake.

Amber halted, panting.

Alex caught up with her, and grabbed her shoulder, pulling her close.

They watched the ground move.

A fumarole rose a foot or more on the northeast side of the ancient caldera.

Lava dribbled out the top. It was slow, like Hawaii lava. It meandered down the side, and toward them along the ridges of previous flows.

The last eruption had been 760,000 years before. Now, it gurgled beneath their feet. With this type of lava, they could probably safely grab a sample.

A thunderous sound escalated behind them.

He turned. An ancient boulder of dried lava had crashed to the ground from the opening of the narrow six-hundred-foot long tunnel into the caldera.

If the sides crashed, they could be trapped, with no escape.

He glanced across the caldera. There might be an opening on the opposite side. He didn't want to take the chance.

Amber glanced at him, pecked his cheek with a kiss, and ran back to the four-wheeler.

Alex's heart leapt as he ran after her. Chills raced up and down his spine. Whether from Amber, or the volcano, he wasn't sure.

Amber stuffed the new samples in her bag, closed it, and jumped on before he reached her.

He climbed on. "Sure you don't want fresh samples?"

Amber grinned. "You are the volcano expert. What do you think?"

He glanced back at the fumarole. A chance in a lifetime. No one here to know if something goes wrong. And, no recent history on this thing? "Let's hurry!"

He grabbed the key she dangled beside him.

He drove as quickly as he dared down the long tunnel. He chuckled, thinking of what the Native Americans likely called this birth canal shaped formation. If they didn't, it was an apt description, especially now.

As soon as they were out of the narrow pass, he pulled to the side a moment to look back at the caldera.

Steam spiraled upwards from the fresh lava flow. They, however, were in no condition to grab any samples. Him with a

broken arm. Her unable to drive. Corbo would be waiting on them. This volcano, new as it was, yet ancient at heart, would have to wait. Another time, another team, perhaps. He picked his way through the remains of the ancient lava flow. New lava would fill the old ruts. It may take days, or weeks, depending on how much pressure had already been released.

A tremor near here could be deadly as the ground would shift, and might toss them in the air. He picked a path through the maze.

Near the time Alex thought they should be approaching where Corbo and Livia were, Amber squeezed her legs around his back.

He stopped and turned off the motor.

She jumped off, glanced around. "Don't look."

Grinning, he turned back to look for the lava hut.

"Okay. Wanted to be done before camp. Call your dad right quick, and let him know what we saw. They will expect us to make a camp and rest a bit before we go on."

"I don't have much battery left."

"Windy said she had a plan. Not sure what it is. She said not to worry."

Alex dialed his dad while Amber climbed back on.

"Hey Dad. What do you know about the Jornada del Muerto Basin?"

"Well, son, it's bulging, like all the other volcanoes."

Alex grinned. He knew something his dad didn't know. A first, and hopefully the last, on volcanoes. "A fresh fumarole with a leaky caldera greeted us. Had to keep our distance."

"Be careful. That volcano has dammed the Rio Grande in the past."

"Hey Dad?"

"Yes son?"

"How old were you, when you and mom started dating?"

His dad laughed. "Does that matter now? I was about your age, maybe a little older, not much though. Why do you ask?"

Alex's cheeks felt hot. "Um. No reason. I miss Mom."

"We all do son. We all do." His dad's voice sounded tired. "If she were here, she and I would be where you are. You know that, don't you? We both wanted you to finish your studies."

"I know Dad. I'm glad I am here. This is my first real field experience. Nothing against Hawaii. It's home to me. I've been

there all my life. A real live volcano is a fascinating experience." Alex tried to hide the excitement from his voice. Didn't want his dad to think he would jump into one. He'd call him home for sure then.

His Dad sighed. "You're right son. We never took you traveling. Maybe we should have. Tom said you might have found a girlfriend. Make sure she's smart, as well as pretty."

"Oh, she is." Alex glanced back to determine if Amber heard what they were discussing.

She giggled.

"I better go. We have to make camp."

"Be careful, and take care son. All of you out there."

Alex closed his phone to put it away. "Sorry, that slipped out, I didn't mean it to. We haven't even talked about it. And I don't want to."

Amber laughed. "Alex, stop being afraid of your feelings. We have talked about it. Even Tom knew how you felt. Why do you think he went home so soon? He had to bring your dad out here. I noticed, you didn't ask him when he is leaving Hawaii, or where he would evacuate to."

Alex shook his head. "I didn't even think to ask. I never ask. I wait for him to give directions, or tell me when he plans to do things."

Amber put her arms around his chest. "That won't work anymore. You aren't six now. Take us to camp, and then you start making more decisions on your own. I want to know what they are."

He chuckled and started the engine. Within a few minutes, they reached the other four-wheeler wedged between a few piles of lava.

Corbo came around the corner of a lava rock pile.

"Caught another rabbit." He held it up.

"With what?" Amber asked.

"Snare. Surprised they are out in the heat. Livia is waiting."

Alex was surprised too. The sound of the four-wheeler may have startled the rabbit into venturing out in the heat. His sweaty neck prickled.

He turned and followed Corbo into what looked like a rock wall. The vertical walls were thin, and so close that they had to hold their breath to squeeze in. Once inside, there wasn't much room. Enough for the four of them to sit.

"They sure knew what they were doing, didn't they?" Amber said.

Livia nodded.

Corbo skinned the rabbit and prepared it for the fire.

"Are you okay?" Amber asked.

"Tired. While we roast the rabbit, let's rest. It's been a long week." Livia leaned back against the wall, her phone in her lap.

Alex hoped she hadn't called her friends and told them where they were. He glanced at Corbo.

"Alex you rest. I'll watch the fire to be sure it doesn’t smoke too much," Amber said.

Alex glanced around the tiny space, and leaned his head on Amber's lap. "Sorry. Nowhere else to stretch out."

"That's okay." She patted his cheek. She poked the sticks in the fire to keep it going.

"Most people will think the smoke is part of the fumaroles and volcano mouth behind us." Alex closed his eyes.

It would be a long night. He leaned back and drifted off into a nap.

Chapter 33

Jornada del Muerto Basin, New Mexico

Amber poked the fire. Sparks flared and flickered.

Livia leaned back against Corbo; resting her head in his lap.

Amber leaned against the wall, and watched the fire.

Hypnotic flames caused images to dance before her eyes. She wasn't sure if they were past events, future events, movies, or bits of news coverage. Flashes of roads buckled and split, cars trapped, pancaked between bridge layers. Buildings wavered like flowers in the breeze as people screamed from windows, jumped, and tumbled down. Oceans swelled, boiled, and raged across people and buildings, and washed them out to sea.

A flame jumped high.

Amber's head jerked up.

Livia tapped on her phone.

"What is it?"

Livia glanced up and sighed. "I have been trying not to chat with my friends too much. They think I'm not trying to stop you all. I don't know what to do. I do believe these events are punishment for the crazy choices our nation has made. Stopping you and Alex isn't going to stop the punishment. They think it will."

She closed her phone. "They claim we have too much information, and should live as people were meant to live. I'm not even sure anyone knows what that means these days."

"Sounds like something Windy would say."

Livia nodded. "I think she's right. She wants us to be careful. Someone needs to know what's going on underground."

Amber glanced back at the rabbit roasting. "It's almost done."

Livia stretched a little. "Good. The sooner we are back outside, the better."

"More tremors should be coming soon I guess. Will they ever end?" Amber sat up. Something shivered up her spine.

"There were several small ones while we waited on you. Not sure how much longer this cave will hold up." Livia stretched and sat up.

Amber remembered her vision and shuddered. She rubbed Alex's head. "Time to wake up. We have to go outside and eat. Now."

Alex yawned and rubbed his eyes. He reached for a towel, grabbed the rabbit, and crawled out the opening.

Amber grabbed her backpack and followed.

Corbo and Livia joined them.

They sat in the shade of the hut and ate.

Amber's forehead prickled.

Silence echoed. No visible creatures, not even lizards sunning themselves as the sun set. With each turn of her head, stones appeared to move.

Heat shimmered on the dried lava around her. Off in the distance, the fumarole in the Jornada del Muerto steamed. Far less than the steam on the Magdalena Peak the day before.

All of the rabbit meat was gone, washed down with a little water.

Amber pulled out the snacks Windy had given her. Dried nuts and more beef jerky rolled in her pillowcase. As she handed out the treats, she glanced at the map on the pillowcase. Her finger drew the line of the "Ring of Fire." Next, she looked for the place they were at now, to draw a new invisible line though the region.

"Amber, are you worried?"

"Need to update my pillowcase. Look." She held the pillowcase up. "Some of the threads are pulling out. Guess they need repositioned as well."

Steam from the new Jornada del Muerto caldera distracted her as she smoothed the pillowcase on her lap. The steam suddenly doubled in size, and a rumbling echoed through the air and ground. Rocks and boulders bounced as the waves passed through the earth beneath their feet. She shoved the pillowcase in her pack; and crawled to the four-wheelers, afraid to try to stand.

The ground rumbled and groaned as Alex, Livia, and Corbo followed her example.

Part of the roof of the cave they had been in crashed to the ground. As it landed, the walls exploded outwards.

Amber covered her face, and turned to avoid flying debris.

Sharp pieces of dried lava hit her skin, and caused a few minor cuts.

The Jornada del Muerto's re-birth pains belched up a coating of ash that now showered them. The volcano itself was out of sight, though not far away in geological distance.

Alex coughed. "It's almost dark. We better drive on across while we can."

Amber held her hand up. "Wait. Let me call Mom before we go."

She reached for her phone and hit the speed dial. She coughed. A busy signal. She closed the phone and shook her head. "Let's go."

Alex reached out his good hand to her.

She covered her mouth, and reached for him.

They climbed onto the four-wheelers and steadied themselves for the rough trek ahead.

Alex started the vehicle. "It could split. Better hold on tight!"

Amber hugged as close as she could, shoving Alex's pack to the side.

The up and down motion over the miniature valleys and hills from the ancient lava flows might make her seasick. They had to go on.

Rocks tumbled behind them, and ahead of them. The dried lava bed stretched and pulled. Cracks echoed, loud as a rifle shot, as the ground around them split and resettled.

Livia held on, pale as paper beside her.

Amber tried to smile at her.

Livia gazed off to the other side.

They reached the end of the dried lava flow. The ground here was rocky, and pushed up from the where the flow had ended so many centuries before.

If times had been normal, Amber would gladly have spent a few days here with Karen, her Mom, and Brandon. So much to explore, and learn. Now, it didn't seem to matter, as the landscape behind her changed before her eyes. Nothing learned today would be valid tomorrow.

The stability she had grown up with was gone. She had to be strong. She held Alex tighter.

Alex stopped behind a bush, giving them as much cover as he could.

There was the fence. The quakes had shifted the fence poles. Oryx, or deer, had knocked it onto the ground. Windy had the

report. Someone would be sent to repair it in a day or two; if the events slowed down.

Alex checked the road, both ways.

Crossing the fence wouldn't be too rough, though anyone on the road could see them.

He stepped back behind their hiding place. "Well, this is it. The road. Once we cross it, we are on the base. Is everyone up to this?"

Corbo glanced back at Livia. "We don't have a choice. We have to stay with you."

Alex sighed. "Do you trust us Corbo?"

Corbo looked down at the controls in his hands. "Not fully. I have to be sure you don't do anything to make it worse. Of course, now I have other things on my mind to."

"Corbo, we will find your dad; if he is alive. We have to make it through this first. Find out what is happening up there." Amber pointed to the mountain range on the horizon.

"I don't want to go," Livia said. "You can't leave me behind either."

"We wouldn't," Amber said. "Together, we find the answers and save the community."

Buzzing bees broke the tension.

Amber reached for her phone. "Dr. Rebecca, not mom. Hope everyone's okay."

She flipped the phone open. "Hello."

Noise echoed in the background behind Dr. Rebecca's voice. "Brandon was hurt in a cave-in. Maybe a broken leg, we don't know."

Someone shouted in the background.

"Your mom is trying to reach him, if the military will let her leave the base. They say they need her here to interpret data, not racing after Brandon. Be careful. Call when you are safe."

Something crashed behind Dr. Rebecca. A scream echoed through the phone.

The phone clicked to silence.

Amber shook her phone, and then dialed Dr. Rebecca's number. No answer. No answer at her mom's number either.

Amber looked up at the rest of the group. "Brandon's hurt. Mom wants to go to him. And they won't take her there."

Alex looked away. "It's a fast trip in, and out. By the time we return, there may be news. Everyone, turn off the phones. All of them. Anything that may distract us."

"Can't turn Windy off," Livia said.

"She'll be watching. With her help, we can do this. No idea how much time we have. Or, how dangerous this situation ahead of us will be. Let's go!" Alex turned off his phone as he climbed back onto the four-wheeler.

Amber grabbed hold of him. A tear slipped down her cheek. Karen thought everything here was going well. The worst news was that neither Amber, nor her mom, could be there with Brandon. No time to call her, and no need to worry her. She hadn't answered her last few phone calls anyway.

Alex started the engine and drove straight to the road. The land all around was clear. Open, with no places to hide.

Amber wasn't so sure this trip was a good idea. She had always trusted those around her to make decisions. Then, she verified they were good decisions, or stayed away from that person. Her mom trusted Alex, so hopefully Alex knew what he was doing.

The military didn't know they were here. Once they entered the base, there'd be no turning back.

Chapter 34

White Sands Missile range to the San Andres Mountains, New Mexico

Amber took a deep breath as Alex crossed the road. Technically, they were breaking onto the base without anyone knowing they were there, other than Windy. They had to trust her. She had asked them to go.

Dusk deepened as they reached the first gentle valley.

Alex slowed, to let everyone catch their breath. He'd have to determine which mountain which would be the easiest, and quickest to scale.

Corbo pulled up beside Alex. "Is smoke a good thing to go towards, or away from, at this point?"

"Depends. Can you see some?"

"Sure. Up there, on that peak, the furthest away. Not much. Could be a campfire, or another fumarole."

"Do you think we are safer on the roads, or off them?"

Corbo surveyed the ground ahead of them. "If we stay on the roads, our fresh tracks will look like they belong. If we go off the beaten trails and roads, someone may become suspicious and follow."

"That may add miles to our trip. Amber, what do you think?"

Amber couldn't see the smoke, or steam, whichever it was. "You are the authority on volcanoes. I explore earthquake zones, preferably sleeping ones."

Alex laughed. "Nothing is sleeping here, nor has it for many days. Better be going."

"Go to the peak then. We have to know if the activity has spread this far east."

"It's about an hour away." Alex drove towards the peak. He frequently scanned the skies.

More steam or smoke might appear on either side. No birds were visible in the moonlight. Perhaps that was good thing. If Amber saw a bird outline, she'd worry whether it was a helicopter, or military plane searching for intruders.

A few minutes on the road, and Alex slowed down. Three roads converged at this point.

Corbo pointed in one probable direction, so they turned that way, continuing east. They had to reach beyond where people were expected to be, before they could turn north to the mountains.

Silence wasn't so golden here. Every rock seemed to be listening for breathing that didn't belong.

Alex paused at a wider road than the one they were on. He glanced both ways, and crossed it.

Shadows wavered in the broken moonlight. A pile of rocks appeared far off, though actual distance was deceptive here. Those rocks could be hiding anything. If cameras, or other monitoring equipment, were hid in the rocks, they would be detected.

Alex and Corbo approached slowly. Alex's muscles tensed and twitched. He wasn't used to this outdoor life any more than Amber was.

No matter how long they had stayed on a site, there had been a trailer with running water to stay in at night, or after a day or two. It had been days since their last shower. Animals would be attracted by their body odor.

Alex took a deep breath, and Amber gasped.

An oryx jumped out from behind the rocks. The antelope ate the scrub brush down, the better to locate intruders by. The animals leapt away from unexpected people.

Alex drove around the oryx.

Two more hid on the other side of the rock.

No sign of any people. They were in luck, so far.

This road, little more than a trail, dipped to the south, and rose to the north within minutes. Every so often, smaller trails; made by vehicles not much different from theirs, branched one way, or another, sometimes nearly parallel for quite a distance.

The route turned north. Peaks steamed ahead. Distance was deceptive here. Miles away, the steam billowed, and the wind blew it around, in eerie shapes and formations in the moonlit darkened sky.

It reminded Amber of a Halloween postcard. If only this were a scary movie and not reality. She'd wake up in the morning with Karen, and they'd find that her mom and Brandon were fixing

breakfast in the kitchen with the early morning sun shining in. Amber blinked.

A more used road branched off, and rock formations appeared in the distance. They looked alien, and out of place to Amber. She squeezed her legs around Alex's middle.

He slowed to give her a chance to survey the landscape.

There in front of them was the largest crater she had ever seen. The moonlight showered the crater with light. It gleamed and glistened, lighting the area. Headlights wouldn't be needed, even on a less than full moon night. She shivered in fear of what caused it, as well as what dangers lurked deep within.

Craters on the base were most often of bomb origin. The route Windy had penciled in would take them near two atomic test craters. She shivered at the thought. Radiation at dangerous levels should be long gone, or Windy would have warned them, wouldn't she?

They passed it slowly, and reached a crossroads.

Alex turned right, and followed a good road.

Soon, they reached a pile of brush before a major road.

He paused, and looked both ways, crossed it, and followed a smaller trail to the right, back south. Within minutes, Alex paused at the brim of another impact crater.

A future crater-lake region, if water ever flowed here again, as it once had. Amber held on tight. When water penetrated these craters, would they stir up buried radiation? That was a question to ask Dr. Evan. Her mom or Brandon might not know the answer.

Alex followed the trails north, passing many side trails. They were on a main road, so they were cautious. He turned closer to the smoke in the distance.

So far, they had seen no living creatures besides themselves, and the oryx. No other sounds louder over their engines, not even a rattlesnake. No wolves howled in the distance. Everything appeared unreal, almost as if they had landed on Mars. They passed another large impact crater, without stopping to glance at the fenced in area.

Amber held on. Vibrations from the four-wheelers made it difficult to determine if the ground was still, or quakes were happening. Her head spun and ached from the jerky movement, even stranger than riding a horse.

Alex rounded curves and turned, following the road warily. He stopped.

One road went perpendicular from the direction they were pointed. Nothing appeared to be on it. A few bushes grew beyond the road. There was a second parallel track. This was an excellent place for an ambush of unsuspecting people.

Something rattled, perhaps a snake, perhaps not.

Nothing was visible in the darkness. That didn't mean no one was there.

Alex pushed the gas pedal to race away from potential danger. The parallel roads were soon far behind them. The trail ended abruptly; sending the four-wheeler into a skid.

Corbo pulled up beside him, trying to stay in the tracks.

"We need to turn east anyway. The cloud is over there, almost hid by the hills now."

Alex nodded. "We have to meet up with another trail." He turned around, and followed the trail back a short distance to another road, and a seldom used path next to it.

Hopefully their tire marks wouldn't appear fresh.

He drove across the rough path to the road. Reaching it, he watched for any signs of movement. Alex's muscles tensed under her hands.

They didn't know if the cloud was campfire smoke, or volcanic steam. While there was an area at the White Sands National Monument where camping was allowed, the vapor rising from the mountains was too far to the north to be in the designated areas. Unless a group of soldiers camped out on the mountain watching for signs of trouble.

Within moments, they reached the end of the road below where the cloud billowed up from the mountain. Alex reached to turn off the four-wheeler, and left it running. "We don't want the noise of turning them back on. Livia stay here and watch the vehicles. You have your crutches?"

Livia nodded and scooted back enough for Corbo to step down.

Amber almost groaned when she tried to step down. Her thighs would never feel the same. She was afraid she would walk bow legged for the rest of her life after this trip. Waddling after Alex and Corbo, who weren't doing much better, the land formations shifted from desert to volcanic.

The mountain trail zigzagged through ragged clumps of ancient lava. Brush, grass, and small trees hung on, with roots twisted above the ground, as well as below. No tiny feet scurried through the desert night. Scorpions and spiders should be out searching for desert nightlife snacks.

Bits of scrap material fluttered from branches. Someone had been here recently, and left in a hurry.

Amber stayed directly behind Alex, watching the ground to avoid stumbling in the shaded areas.

Alex stopped and held his hand up.

Amber stepped around him.

An open seething pit of liquid, like something one would expect to see in Yellowstone National Park yawned around the bend. Steam billowed, and showed no sign of stopping.

Corbo made a slight sound, and pointed.

The clouds parted. Star light peeked through. The mountain range steamed, an unwatched pot, ready to boil over.

Amber gasped and grabbed Alex's hand.

His body shivered. "Let's go."

They hurried back to the vehicles.

"Back the way we came if you can remember it," Corbo said.

"Wait," Livia said. "Refill the tanks before we start."

Alex nodded, and unhooked his spare tank.

"Thanks." Corbo smiled at Livia and filled their tank.

Amber waited on Alex to finish refueling before climbing on.

Alex turned them around, and hurried back as fast as he dared.

The four-wheelers could reach seventy miles an hour. If the track was visible far enough ahead, that would be wonderful. As it was, he had to steer by starlight, and remember a rough road he didn't know well, with hidden bumps and ruts. Tortoises or armadillos might be on the paths. Hit one of them, and they would fly through the air. Speed wouldn't be safe, if they wanted to reach the Immi Clinic in a hurry. Amber hoped he drove safely as well as quickly as they raced between the steaming range, and back toward the now flowing Jornada del Muerto caldera.

The parallel roads veered into view in front of them.

A small light twinkled in the distance. Was someone alerted? Amber hoped no one had followed them. They were riding out the

way they had come in. If a soldier had been hidden in the brush, he could have radioed for backup.

Wolves howled in the distance. At least, she hoped they were wolves, and not guard dogs. Shivers raced up her spine. Trying to find answers to the geological questions, and out run potential natural disasters was not how she planned to spend the final weeks of her senior year.

It was supposed to be peaceful. Then off to work with Mom, Brandon, and Karen at her side. Karen's boyfriend, Jerry, had promised to find her a date for prom. A tear slipped down her cheek, and she didn't dare let go of Alex to brush it away. Prom may have even already happened. Time flowed in an unexpected pattern. The life she had known seemed gone forever.

At the smaller crater, Alex paused, and Amber glanced around him.

She didn't think that rock had been in the road as they passed through, twenty minutes ago.

Alex didn't look back. He sped up.

Amber held on. She glanced back to be sure Corbo and Livia were behind them.

Corbo's face was almost as pale as Livia's.

Beside the larger crater, Alex slammed the brakes. The oryx herd had found them. Of maybe a different one. This time there were about twenty. He crept around them, and back on the path. They reached the last major road. Alex paused.

Something moved down the road, towards the main base.

Amber couldn't determine what it was, or how far away. Her heart beat fast as she clung to Alex.

More trails, more turns, and more rocks to pass. They reached the fence, and scaled across it. At last, they reached the relative safety of the edge of the lava flow. Amber could breathe as Alex slowed.

"Anyone need a quick break?" No one answered, so he continued on across the lava field. It was a long way back to the Immi Clinic where Windy waited on their report. Once they made it there, Amber could breathe again, until she called her mom.

Chapter 35

Jornada del Muerto to Immi Clinic to Rio Grande, New Mexico

Within seconds, they crossed into the first series of ruts. The remains of the lava hut teetered in the moonlight. Would anyone try to rebuild it in the future? Right in the center, it would be an excellent research center for the volcanoes, if they were predictable, like the ones in Hawaii.

The last few hours for Alex had been a nightmare. He now regretted his wish to see a live volcano in action. New Mexico bubbled with far too many, and these weren't the relatively predictable volcanoes he knew in Hawaii. Whether the shaking was volcanic, quake activity, or a combination, he didn't know any more than anyone else did. It was scary to be so close to a volcano when it might decide to erupt; or the ground chose to shift under their feet. The road might split, with a lava pit unexpectedly yawning at their feet.

He hoped Amber was taking this trip well. She had been unusually quiet, even for her, during the trip back. Of course, her riding behind him hardly made conversation possible.

The path across the Jornada Del Muerto plain was riddled with cracks and crevices. Even if they were near one of the few roads that crossed it, those would likely be damaged as well.

Alex drove cautiously though the ruts. A popped tire, with volcanoes steaming on both sides would leave little hope for escape. He paused to watch the steam from the new Jornada del Muerto caldera circle upwards into toward the moon. A bird flew fast up high. If only he could grow wings and fly himself and Amber to someplace safe. A call back to General Nord, with all the data his dad and Dr. Rebecca had collected would surely be enough evidence to evacuate the state. Though where to, remained a mystery.

Amber squeezed his thighs, which sent chills up and down his spine.

Alex continued on. Dreams of flight to safety kept him alert as much as the jolts kept him awake.

At last, the outline of the horse pen and building where Windy and Champ, would be waiting appeared. The building was all lit up, as busy at night, as during the day. Injuries and illness know no "proper" time. He drove around the corner.

A small group of people waited.

Windy walked up to him.

"Hi Alex, how was your trip?"

"Hi Windy. Thanks for the four-wheelers. We saw what we needed to see. I don't think anyone, other than the onyx knew we were there." Alex turned it off and handed her the key and helmet.

Windy smiled.

"It isn't good. The Jornada del Muerto caldera has reformed and is dispensing lava. At this pace, it may take days, or weeks to close the tunnel, unless, a quake shakes the sides down first."

Amber stepped off and stood beside him.

Alex patted the handlebars. "The whole hillside and mountain range of The San Andres fault system appears to be a series of steaming, loosely connected open lava pits. We looked in one, and that was enough to make us run."

Windy nodded. "Better alive to report your findings. It is enough." She glanced at the corrals.

"Take your horses back. I have prepared more packs for you. Where do you go from here?"

Two men near her leaped over the corral fence.

"I don't know. No one has ever seen anything like this. What do you think?" Alex watched the men call the horses to them gently. So different than those men in the other corral. That night seemed so long ago. Less than two nights ago. Those horses had served them well.

Windy turned from the fence, and peered through the darkness toward the forming volcanoes. "We want our lands back to try to heal them, or live with them the way they are now. Take your young friend, and go somewhere safe. Far away from here, if you want to live. It isn't safe when the Earth vomits, twists, and turns, as she lays down new skin."

Amber's hand held his. She blushed in the florescent lights, or maybe it was sunburn from the day on the lava flows.

Windy's friends came up with their horses, and fresh packs of food. Corbo handed the keys over to Windy, nodded, and turned to help Livia onto her horses.

Amber used the four-wheeler as step to Fortune's back. The corral lights flickered.

In the distance, the Jornada del Muerto basin shimmered. Whites, greens, and even yellows danced across the ground; much as he imagined the Northern Lights danced across the skies.

The ground rumbled.

Frozen, Alex couldn't move.

"Go, now!" Windy screamed.

The horses neighed and tried to escape.

Alex jumped on, and galloped after Fortune, hoping Corbo and Livia were close behind.

The rumbling followed them as they raced across the landscape, toward the river. The ground twisted, turned, and buckled.

Alex held on tight as his horse followed Fortune. If the horse's leg hit a hole in the eerie, shimmering semi darkness, Alex would fly across his head. He gulped.

The ground ahead of them shifted again.

His horse panted and groaned.

The river couldn't be far.

Amber screamed, and Fortune stopped, panting.

Alex pulled up beside her.

Feet away, the ground opened in an enormous gulf. Not having seen the river here before, he was unsure of its previous width. From the look on Amber's face, she wasn't expecting this. The other two horses pounded up behind them.

Corbo whistled at the noisy swirling waters below.

"Where to now?"

Livia slumped on her horse. "Some rest soon. I am exhausted, and this event is going to traumatize the whole countryside."

Amber walked her horse south. She stopped.

Behind them, the lava fields no longer shimmered. In the limited starlight, her face was paler than Livia's.

Amber walked her horse back to the group. She looked past Alex to Livia. "Livia, I'm sorry. Can you take any pain medication?"

Livia shook her head.

"What we have is a line of forming volcanoes, as well as an erupting volcano to the east." Alex's arm waved to the red sky, dust and shadows enveloped the land they had crossed.

Alex's horse stomped and tried to take the lead. "And an angry blocked river to the west. We aren't safe here. If we go south and this natural dam breaks, we would die in the floods. East, the volcano's lava, or dust, may cover us. The wind is blowing the ash further east at the moment. This plateau has been flooded before when the Jornada del Muerto erupted."

The river lapped below their feet as it swirled and raged trying to spread past the blockade downstream.

Amber sighed. "I hope the Immi Clinic can be evacuated in time, they may be underwater soon. We have to go north. We should have been able to cross here. No way now." She turned her horse north and trotted off, not bothering to check if anyone followed.

Livia sat up as straight as she could, and followed Amber, setting her jaw to the pain and exhaustion.

Alex raced to catch up with Amber, giving his horse full rein. He yelled to her, "Where to?"

"The river below San Antonio is blocked. We will never make it in time. We have to run a few more minutes before we both report in."

She raced ahead of him.

It was all he could do to almost keep up as she dodged bushes, trees, and shrubs, as well as animals trying to escape the lava flows in the east. The animals, like themselves, were trapped between the lava and the raging river.

Ahead was a small pile of rocks.

A young male held his hand up.

Alex and Amber slowed, and waited for Corbo and Livia to catch up.

"Windy's friend?" Alex asked.

The young man barely inclined his chin.

Amber slid off her horse.

Alex slid off, careful of his broken left arm.

The river swirled and roared behind them.

Amber pulled her phone out.

Alex pulled out his phone to report in to his dad.

The phone rang. His dad should be in bed. They had ridden most of the night, or maybe he was counting the hours wrong.

"Hello?"

"Hey Dad. No idea what time it is there. We have trouble here."

"I know son. I am going to try to leave. Tomorrow, I promised Tom, and his mom, we'd go to Colorado and help monitor from there. No idea what we can do."

"Dad, the last blast, it dammed the Rio Grande. That hasn't happened for millions of years." Alex gulped. This would be the tough part.

"We are trapped between the lava flows and the river. No way out, that we can see. Trying to go north. With all the quakes, and damage there already, not sure where we can go."

Silence on the other end.

"Dad, you there?"

"Yes son. I'm worried about you. Please be careful. You are my hope. My future, no matter what happens. I have to go, and try to prepare. We leave in a few hours." A checked sob choked across the miles.

The phone clicked off. Alex hoped Tom's mom was there to comfort him.

Alex turned to Amber.

Her face, whiter than snow, looked up to him. "Alex, they think she's dead. A building fell on where they think she was. And Brandon, no one knows. Dr. Rebecca is scared. The last one, the reports are ugly."

Alex pulled her close. "We'll survive, some way."

Amber nodded. "There's no escape. Lava, river, quake damage, that last tremor was likely an 8.5. No telling how badly it destroyed whatever was left of the towns north of here. They were already on the edge. Frail buildings from previous damage likely crumbled onto anyone sleeping in them." She leaned against his shoulder and let the tears out.

Livia reached over to her as well.

As Alex held her, he remembered the young man they had stopped for.

The man leaned against the rocks.

"Can Windy help? She's done so much already."

The young man nodded, as if he could not speak. He pointed to an open area a few yards away.

"Do we need to wait there?" Amber asked.

The man shook his head and pointed to the sky.

"Help is coming? A helicopter?"

The man nodded.

Anywhere else would be wonderful. Alex would never wish to see a live volcano again. Amber might lose Fortune, and that would break her heart. Four horses could not fit in a helicopter.

A faint rumbling other than the river, began in the distance. It grew louder, as the helicopter flew into sight and closer to where they stood. The young man reached out, and took the reins of all of the horses.

A large helicopter landed. As it hit the ground, the door opened and they ran for it. The blades never turned off. The noise, though deafening, was lower than the increasing roar of the trapped river. Soon, that river would break its bounds.

Alex helped Amber in, and turned to help Livia. As soon as they settled in their seats, Amber waved to her horse. Alex hoped he could make that loss up to her someday. Her mother, Brandon, and her horse were too much to lose in twelve hours.

The crew on the helicopter didn't even try to speak to them over the rapid pattering of the blades. They took off northwards across the swollen river.

Alex put his good arm around Amber. She leaned against him, looking down, resting her head close to his chest.

Corbo and Livia leaned against each other.

One of the crew placed a backpack under her injured leg and covered her with a blanket.

Alex was ready for some quiet, and a good night's sleep would do them all a world of good. He couldn't remember now when his last good sleep was. Maybe back at the trailer, that one night. Or, did they have two nights there? He had forgotten. It was difficult to keep awake, so he squeezed Amber's shoulder. She glanced up and smiled. It would be awhile before they could rest, and talk in private.

The helicopter started downward, landed, and a few more people climbed on board. The helicopter rose, and continued on its way.

Alex moved his legs, trying not to disturb Amber. They could be going anywhere, and anything could happen. For the moment, they were safe from Mother Nature's fury.

Chapter 36

In the air from the Rio Grande back to Los Alamos, New Mexico

Amber leaned her head against Alex's shoulder and drifted off to sleep under the monotony of the whirring blades. Alex held her close, the only sense of normalcy left. So many people missing, and the world breaking apart at her feet. She'd find a way to build a new life, with or without Karen, Brandon, or her mom. A sob snuck out under the sound of the blades. She'd rather have her mom beside her. There was so much she needed to know about life that her mom had never had time to teach her.

The tone of the blades changed.

Amber sat up and looked out the window.

The helicopter landed. This time the blades slowed until they moved about the speed of a ceiling fan on medium. The crew waved them all off.

Alex and Corbo helped Livia to stand. As soon as they were on the ground, he stepped down, to help Amber.

Amber grabbed her pack and Livia's. She stepped out of the helicopter into Alex's arms.

The other people they had picked up followed her out of the helicopter.

One of the crew pointed towards a military jeep driving their direction.

Alex sighed and started that way, his arm around Amber's shoulder.

The men and women behind them wrapped themselves in blankets and staggered sleepily toward the jeep.

"Welcome to Los Alamos." General Nord stopped beside them. "Please, join us." He waved to the door.

Amber shook as Alex held her arm. What would the General say to them? She needed to find out if her mom had survived the falling buildings.

The jeep stopped outside a long, low building.

Alex held Amber's hand as they followed General Nord into a small room.

"I am sure you are all tired. Restrooms are around the corner to the right. Coffee is available across the hall, and food will be brought soon."

General Nord then turned to the other passengers. "I am sure you want to know your town, and its citizens are safe. You stayed until they evacuated?"

One man nodded.

"Of course, some will hide and refuse to listen to the sirens. More town leaders will be coming soon, and we will meet in a larger room. Meanwhile rest here until they arrive, and let the helicopter's buzz leave your ears." General Nord turned and walked out of the room.

One woman turned on the light. "This room isn't too bad. At least they left us pillows and blankets."

Amber and her friends left the room for a few minutes.

When they returned, the other group were talking at the table, some wrapped in blankets.

One woman came over and helped Livia settle on a couch in the back of the room. She wrapped a blanket around her leg, and put a pillow under her head. "Why are you all included? I thought this was for town leaders?"

"What town are you from?" Alex asked.

She smiled at him. "San Antonio. It was practically destroyed. And they forced an evacuation of all living residents. They didn't tell us much."

Alex nodded. "We drove through there a few days ago, and it was bad then."

Amber snuggled under a blanket. "It's worse now. Plus, the river is dammed."

The woman's eyes opened wide. "It is? No surprise they evacuated then. With the canals, and floodplains everywhere, there is no telling what may happen. Do you all need anything?"

"Rest. We haven't slept in a few days," Alex said.

"Settle into a chair and nap. We can turn out the overhead light and talk by the light through the door."

Amber plugged her phone into an outlet so it would be charged to call Karen when they woke up. A quick check of email showed no

recent messages. Karen should have responded with something by now.

Alex added his phone to the surge protector. "Good idea."

"A message from Josie," Livia said. "She wants to know where we are, and talk to me."

Amber glanced at her.

Livia looked up and handed the phone to Corbo. "I'm not replying."

Amber already half asleep sat down beside Livia. All of her energy had been used up. When she woke, she'd try to find Dr. Rebecca, and her mom if possible. For now, she leaned against Alex as her eyes shut of their own accord.

The woman laid an extra blanket across them and tucked it in.

Amber tried to say, "Thank you," in an incomprehensible mumble.

The lights dimmed.

Her eyes relaxed.

What seemed like moments later, General Nord appeared. "Alex, Amber, friends, wake up. Sorry to wake you so soon. You will be needed in the meeting hall in ten minutes. Meet at the coffee pot in five minutes and someone will lead you." With that, he turned and stalked off.

Amber stretched.

Alex folded the blankets. "At least we had a three-hour nap. Hope I am alert enough to think, and remember everything that's happened."

Amber nodded and shook her arms to rid them of the pins and needles feeling.

A few minutes later, they met at the coffee pot, ready for the meeting.

Dr. Rebecca walked around the corner.

Amber ran into her arms.

Dr. Rebecca patted her back, and said a few soft, soothing words. She turned and led them to the conference room.

Alex took Amber's hand, and wiped away the tears. He held the door open for her.

Above the projector screen was a wall painting of Hiroshima, with the words "Results of The Manhattan Project" in a red semi-circle. Even though the artist's depiction looked small from this

distance, she remembered pictures and video of the destruction she had seen in school. A nation's calamity, turned worldwide, as the after affects entered the ecosystems for years; perhaps continuing to impact some regions today.

Dr. Rebecca led them to the front of the room.

Corbo and Livia sat near the door. Her crutches leaned against the wall.

Dr. Evan was there, across from them. His grim smile brought tears to Amber's eyes, as she asked for news of Brandon without words. He looked down at the papers in front of him.

Alex grasped her hand under the table.

She stared straight ahead, willing the tears back. Other professionals wouldn't take her seriously if she cried. They didn't know why she needed to cry.

General Nord entered and walked to the front of the room.

"Okay, no real time for introductions. You each know why you're here. We have our volcano and earthquake specialists here." He waved toward Alex, Amber, and Dr. Rebecca.

"We have mining experts, and their helpers." He waved to Dr. Evan, Mr. Spike, and a few men beside him.

"We have, people from the Army Corps of Engineers, one representative each from Cochiti, Abiquiu, Jemez Canyon Dams, and the Elephant Butte Dam."

"Last, we have representatives from each of the major towns and villages from Albuquerque south to Truth or Consequences. Any other people, sorry to not mention you, I am sure you are important, if you are here. Dr. Rebecca, can you please tell us why we are all here, from your point of view."

Dr. Rebecca walked up to the screen. It clicked on, and the first picture appeared.

Amber groaned. There was the swirling Rio Grande, almost as they had seen it late last night; or early this morning. It looked worse from this point of view. Her sweaty hands clutched the table.

"As you can see, this is not the way this river section should look," said Dr. Rebecca. "According to satellite pictures, and the reports of our field specialists," she turned to look at Amber and Alex. "Mother Nature has dammed the Rio Grande."

She waited on the pictures to change. "Here is what we see, a dry river bed with ancient lava rocks above them. Looks okay, to the

unknowing eye. However, our representatives from the Elephant Butte Power Plant are here to explain why it isn't."

The picture changed to a sunny picture of the power plant, working at full capacity.

A man walked forward. "Thank you, Dr. Rebecca. This picture was taken in better days, maybe a month ago. As of the last major event, there is no water flow to the lake a few miles above the dam. Our dam provides power, and water, for many residents. With no water to control, there is no power. Food cannot be grown locally without our help. However, this is only the beginning. Our environmentalist is concerned about the long term effects."

Amber groaned. The aftereffects could cause worse problems than that of any recorded earthquake in history. And it kept going. When would Mother Nature's restless legs go back to sleep? How many people would die before the authorities acted to save lives?

A new picture popped up on the screen. The full extent of the damage was an artist's rendition of what Amber had seen and reported. A large lava boulder, the size of a house, had fallen across the riverbed, damming it. Clearer detail would be obtained from an updated satellite picture. None had passed across the dammed area since daylight.

A woman Amber didn't know addressed the crowd. "If the water stays behind this natural dam, it will cause serious problems. In a few days, the water will back up, inundating many of the small towns along the river. It will spill out across the open plains, onto the Jornada del Muerto basin. Eventually, it will spill onto the missile ranges, possible inundating underground storage areas. I cannot say what is there, or not." She sat back down.

General Nord said, "Alex, Amber, we know you were there, on the basin. What did you see?"

Chapter 37

Los Alamos, New Mexico

Alex gulped. How much did they know? He held Amber's hand. "Sir, the volcanoes are active. Lava is flowing."

The pictures on the screen changed, showing the eerie colors of the Jornada del Muerto plain as it had appeared a few hours before. "Sir, those are not the only ones. We saw more, far worse to come."

He fell back into his seat.

People stared at him.

General Nord nodded.

Satellite pictures of the San Andres fault line appeared, with drawn in steam rising from the artist rendered volcanic vents and fumaroles.

Amber pointed with her free hand. "Sir, they are open. The lava fields have spread."

General Nord glanced at her, then back at the room. "You all know our danger. If we do nothing, towns, and military bases will be inundated with water and lava."

He turned to Dr. Rebecca. "What are the chances the dam will break on its own?"

She pulled the picture of the boulder dam up, and enlarged it. "We need an accurate picture, and someone to go there, and face the swirling waters to check it out. It will become stronger the longer the sand particles stay wet. The blockage might remain for days, years, or decades, perhaps a thousand years. It depends on weathering, storms, many things. Some we can control. Others not so much."

General Nord glanced to the environmentalist. "How long until the water reaches the volcano vents?"

Alex wished his dad were here to answer their questions. At least General Nord had moved on to ask questions of others. His hands shook as he thought about how the water rushing over the lava would be different than lava erupting in water. It probably wouldn't turn the flows into pillow lava until they were well inundated.

The environmentalist shuffled her notes. "Depends on the rains; both here, and up north. We may have days, maybe weeks. For the missile ranges, weeks to months, depending on which valleys the water finds open to snake through. And, if the fissures open enough to let the river leak down into the underground water table, steam could erupt, blasting the fumaroles into wide open sores on the land."

Dr. Evan interrupted the gasps in the room. "As the water reaches the open volcanic areas, the steam will change the climate, leading to more rain. The lava fields have shifted, and so have the water tables. We don't have up to date data. It is changing by the hour right now, sometimes by the minute. Where water was yesterday, magma might be today."

There wasn't time to study and learn. There might not even be time to help others escape. If only Amber had gone somewhere safe. Then, he'd be alone here, and Alex didn't want that either.

General Nord held up his hand to quell the chatter. "Leaders, you can see why your towns have been evacuated. Something must be done. We must fight water with water this time. It won't put the fires out, or stop the earthquakes."

He looked at every person in the room. "It may slow down further destruction. We will save what we can." His shoulders lowered, not quite a slump.

The mayor of San Antonio, who had spoken to Alex earlier, raised her hand.

General Nord nodded to her.

"What do you intend to do?" The woman wrung her hands.

"Our engineers have contingency plans on record in this event," he said. "Never intended for this magnitude of calamity, however. Major Gran of the Army Corps of Engineers will you please explain."

Major Gran stood up. "We apologize for the disturbance to your towns. In order to break the barrier, we have blocked the Rio Grande water from entering the canals for the last four hours. In another three hours, all data will be accessed again."

Dr. Rebecca switched the projector to a map of the New Mexico river system.

Major Gran walked up to the wall map and pointed at each dam as he called its name. "If the barrier holds, there will be a timed

release of water from the Abiquiu, Jemez Canyon, Cochiti, and Elvado Dams, as well as a few smaller ones set to come together as a giant wave to wash away the blockade a few miles north of the Elephant Butte Lake."

Silence filled the room. There was no way a wave that large could pass through without devastating the riverbank communities. Bridges would collapse. Riverbanks would break down, some several feet. The entire course of the river could be altered, forever. New channels would open, and others be blocked by debris. If the residents had fled as instructed, they would be safe, while their homes and businesses potentially destroyed. Loss of life to animals, some endangered and only living in this fragile environment, would be incalculable. Mother Nature could give them no warning.

An uproar began as people asked questions and demanded answers.

"My town," the mayor of San Antonio said. "It's all I've ever known." She slumped in her chair.

"Will the tent cities become new towns?" One leader asked.

"I hope people didn't leave their pets behind," Another said.

Alex slipped to the back of the room to check on Corbo and Livia.

Questions floated around the room.

"Wouldn't the river seep right through to the water table?"

"How long will it take the dam to break?"

"How long until we, and our towns, can go back home?"

Corbo and Livia shifted uneasily in their chairs. It was too loud to talk.

The uproar settled as people sat back down, waiting on General Nord to respond to the questions.

General Nord waved to the woman beside him, and stepped back.

"Hi. I run the Environmental work here at Los Alamos." Her hands shook as she tried to hold onto the projector controls. She placed her hands on the table, and leaned forward.

"I am used to addressing a few people. Sorry. Basically, this event goes beyond anything we have, or could prepare for. This isn't a one-hundred-year event. It's a one-million-year event."

Alex walked back to his seat. They were taking Amber and his research seriously. That was good. Dr. Rebecca must have convinced the team here, somehow.

The environmentalist turned to the screen and pointed. Pictures of the area, as artists rendered them, from the last group of eruptions and blockage were there now. "It won't be easy to break down. Nature wears it away in time. Nature's timescale may be too long."

General Nord stepped up. "We don't have the time, equipment, or man power to move everything out of the danger zones. We cannot allow either water, or magma, to reach our equipment on base."

She nodded. "We have an idea how long it will take for the canal water to build up. If that doesn't break the boulder out of place, we must try something else. Could take a day or two. Much damage will be done, whether we do anything or not."

"Break the blockade while you have the river closed further upstream," someone shouted.

The woman pointed to a picture. "Creating a temporary block further upstream, and using heavy equipment to break that lava boulder, would be exceptionally dangerous. It may not work either. The ground all around is wet and saturated. Equipment would sink into the mud."

Alex closed his eyes. If the equipment stuck in the mud, and people tried to work on it, a quake could break the temporary dams upstream, washing away the workers. By the time anyone knew something was wrong, it would be too late to give warning.

General Nord shifted on his ankles. "We also have people evaluating the risks on each base. People working around the clock to determine where the magma is, and where we can move supplies to. Right now, a place that was safe yesterday is no longer safe today. We may be looking at a further withdrawal."

The environmentalist used the pointer on the wall map. "Here, we hope to push the water forward. We must break the blockade before it hits magma chambers to the east. We don't have much time."

"Volcanoes seem to be opening up everywhere." She turned to face the crowd. "We thought we were relatively safe here. Even

with hot springs locally, the magma had been deep within the earth."

Dr. Rebecca placed the current eruptions picture on the screen.

General Nord pointed to several places on the map. "Please inform your citizens we will let them know when it is safe to return to their homes and businesses. However, for now, please stay away from all closed areas. We do not have enough manpower for both evacuation, and rescue efforts. Other states may be mobilized; if, when, and how, the president deems necessary."

General Nord scanned the room. "Alex, Amber, I will meet with you and Dr. Rebecca in an hour. Town leaders, you are dismissed for the moment, to inform your citizens. I must meet with the Army Corps of Engineers and mining officials now, in the next room." He turned and walked through a door.

As the city leaders walked out the door, they loudly discussed what they should say; and how much information to reveal. Too much, and people might rush home to save belongings, and risk being caught in the flood. Looting would become a real problem. Too little, and people would think it was safe to return home to stay.

As the last few people turned the corner in the hall, silence descended on the room, broken by the hum of the projector screen.

Dr. Rebecca sat at her computer; flicking through the most recent pictures.

"Why don't they use a nuclear explosion to break the dam?" Corbo said.

"A nuclear explosion would set off more earthquakes and volcanoes. Not to mention making the state unlivable for generations to come." Amber said.

"They should fuse the plates, shouldn't they?" Corbo turned to Dr. Rebecca.

She shook her. "They may fuse one pair of plates, temporarily. Then, like hairline fractures in glass, they could cause more fractures to radiate out from the original plate. It's a risk too great to take here."

"No one realized this area would become seismically active again, when they built the nuclear testing grounds here." The environmentalist who worked at Los Alamos stood beside him and said. "No one understood the dangers. The weapons and stocked supplies are too dangerous to move. It takes a lot of time and

expertise to do so safely. If a truck carrying one overturned during a quake, we'd all suffer from radiation exposure, if we survived."

"I wish people would leave well enough alone," Livia said. "We don't need weapons of mass destruction."

"Would you give up medicine to fix your ankle? Would you give up cars and air conditioning in the scorching New Mexico summer?" The environmentalist said.

The door squeaked open and General Nord stepped in.

Livia shook her head. "I guess not. I want the good, though not the bad of modern life. We've lived with it for so long, all of our lives. I don't know if we could live without the technology we've come to depend on."

"You've done pretty well the last few days," General Nord said. "Sorry, couldn't help overhearing. Look, we know where you have been, and why. Windy set it up her way. Please don't take off again without letting us know where you are going."

He rocked back and forth on his feet. "Okay, tell me what all you did see, that the satellite doesn't show."

"You aren't angry with us?" Amber twiddled her hair.

"Did you see anything you shouldn't have?"

"I wouldn't know if I did. What weren't we supposed to see?" Amber said.

General Nord smiled. "Alex, what did you see?"

Alex described the scenes, both the Jornada del Muerto basin volcano, and the open calderas he had seen in the hills.

"Did you stop at the new caldera in the basin on your way back?"

"No way, sir. We were too scared. Glad we didn't. We would have been there when the quake occurred."

He looked up at General Nord. "The one person we met after seeing the dammed Rio Grande said Windy sent the helicopter."

"She did. Windy sometimes helps us, by watching for anomalies. Science is a specialty of hers. She is good at picking and training young soldiers, as well as horses."

Alex blushed. Not something he wanted to do.

"I set out to prove Dr. Rebecca wrong, I had to. My livelihood depended on it." General Nord stared at the table for a long minute.

"I couldn't prove her wrong. Alex, I am sending you and Amber away. I tried to keep Amber's mom safe, and now, we don't know if she is alive or dead."

"Sir, don't send us away, we need to be here," Alex said.

General Nord faced him. "Young man, don't argue with me. I have lived my life. If I die in this event, I die. You are a young adult, with many years ahead of you, if you survive. The future will need young men like you and Corbo. Bright, intelligent, and those who know where the secrets are. You may have to find them. I am sending you to the Colorado team. Satellite communications will allow you to continue your work with Dr. Rebecca."

Tears welled up in his eyes. Dad would soon be there, if not already.

Amber stepped in front of him. "Sir, please. We are needed here. Livia and Corbo are part of our team now. We need them. They need us. Mom would have wanted us to stay."

General Nord sighed.

"Besides," Amber said, "If what I think is going to occur happens, nowhere in North America is any safer than anywhere else. Colorado might be right in the thick of it, thanks to Yellowstone."

The General covered his eyes. "Alright spunky young lady. You are like your mom. If I let you stay, promise me you will be careful. And do what is asked to save your lives."

Amber nodded, and so did Alex.

He wanted to see his Dad again. If Amber could have her mom by her side. Someday though, she would meet him, if the quakes and volcanoes settled into their new locations.

Chapter 38

Los Alamos, New Mexico

Brandon missing, and mom likely dead left Amber numb. Her arms and legs tightened, their muscles not coordinated due to lack of sleep, and little food.

General Nord had threatened to force them to leave and go to a "safe" place. For now, he sent them to a room to sleep for a few more hours. Then he would brief them on what was expected of them.

She wouldn't leave Livia and Corbo behind. Livia needed to find hope within herself. Corbo needed to find his father, and his own future.

Karen should have been here to help her. She would have helped Livia and Corbo already, of that Amber was sure. Amber checked her phone. No message. What could be taking Karen so long? The clock said 9:00 am. Karen would be in school and couldn't answer the phone now.

Adrift in a world she had never thought would really happen, at least not to her. She had always warned others, who laughed at her predictions. Dr. Rebecca and Dr. Evan would understand, and listen to her concerns and fears. They had enough of their own. Amber gulped.

Of course, it wasn't long ago historically, at her age, she would be an adult, with all the knowledge she needed to know already learned. Dr. Rebecca, Dr. Evan, and even Alex treated her like an adult. Bravely, she would carry on and learn what she needed circumspectly. She took a deep breath and pocketed her phone.

A young soldier showed them to the two rooms. One room for her and Livia. Another for Corbo and Alex. She squeezed Alex's hand and slipped inside. Her partially opened backpack slid to the floor. On top, the pillowcase protected her few possessions.

Corbo helped Livia into the room.

"I'll be fine. You go ahead and sleep," Livia said.

"I'll cover you," Corbo said.

Livia stretched out and Corbo smoothed the covers over her.

"Do you need anything?" Amber asked.

Livia shook her head, and drifted off to sleep.

Amber stepped back to her cot and settled in, fingering the map on her pillowcase between her hands. What changes would come next? She drifted off to sleep, dreading the wakeup call.

Light under the doorway woke her. Footsteps echoed down the hall.

"Ladies, Gentlemen, are you awake? Your presence is requested in the cafeteria. You will lunch with Dr. Rebecca."

Livia giggled. "Yes sir. We will be there in five minutes. Though, we may need a guide. The maze of this building confuses me."

"I'll wait for you."

Amber sat up and stretched. Almost enough sleep to be called a nap. She would sleep tonight, if they had a chance. "Livia do you need help?"

"Yes, my bad foot is tangled in the blanket."

Amber pulled out her phone and changed her mind. If Karen had called or messaged, she'd wait to check, until she had more news.

It was ten minutes before they all reached the cafeteria.

Dr. Rebecca waited for them.

"Livia, your parents are worried about you. Somehow, they reached my cell phone number. They were evacuated as well. I didn't tell them about your leg, since they didn't ask."

"Thanks. They don't know. No need to worry them. Where are they?"

"They didn't say. Your friends had been calling them before they left. Seems you are missed."

"I'd rather they had forgotten me." Livia entered the serving line.

"Meatloaf and applesauce anyone?" The server held the pan up to show them the dark and dry mixture that was supposed to be juicy meatloaf.

"Okay with me. Some liquidy vegetables too, please," Corbo said.

Alex scrunched his face. "I avoided mystery meat for years."

"I'd prefer the vegetables and the applesauce myself," Livia said. "I keep the meat light."

The woman dished up their food.

"Eat as much as you can. With things in such an uproar, the kitchen is constantly staffed, as people come and go. You all will be

at the bottom of the list, as military people running in and out on assignments will come first," Dr. Rebecca said.

Amber gulped. "What is our assignment?"

She smiled. "Stay here and help me accumulate and distribute data."

Alex let out a tiny groan. "I want to be out there. Doing something. Anything to save people."

"Well, they can put a uniform on you, and stick a gun in your hands. At least you could scare people into following evacuation orders." San Antonio's mayor walked behind them with a tray. "Care if I join you?"

The group stared at her.

"What? Can't I make a joke?"

Alex cleared his throat. "Sure, sit down."

She sat and spread her food out on the table.

"You've been places the rest of us haven't, and seen things we haven't seen. What do you think you will be assigned to?" The mayor picked up her cup of tea.

"No idea." Amber moved the food around on her plate.

Someone came up and handed the mayor a message. She read it and sighed. "I have to go. Looters and other problems back in town." Her hand trembled as she placed the note down beside her tray.

"Be careful out there." Her face drawn and pale, she stood up, and carried her teacup with her as she walked away.

Amber grabbed the page and read:

"Flooding, looting, and wild animals attacking pets left stranded in backyards."

"Why do people leave their pets behind?" She passed the page to Alex.

"It's doubtful they had anywhere to take them," Livia said.

Dr. Rebecca nodded. "Most people thought they would be gone a few hours. Taking some food, and maybe a change of clothes, people took half-empty vehicles. It's also probable the shelters would have turned pets away. No one outside of the base knew the true state of the situation."

Bees buzzed in Amber's pocket.

She pulled out her phone.

Karen's name flashed on the screen.

"Karen how are you?"

Screaming and thumping blasted in the background.

"Amber help! It's here too! I think it's the San Andreas. Send dad home, please." The connection clicked off.

Amber glanced up.

Her friend's faces wore worried expressions.

She redialed and waited.

It rang and rang.

Voice mail picked up.

"Karen, Karen, where are you?"

Amber ended the message, and turned to Dr. Rebecca. "She didn't know about her dad?"

Dr. Rebecca shook her head. "Your mom wouldn't call her, until she knew how he was."

"All scientists, specialists, and city manager's report to this morning's meeting area immediately! I repeat, immediately!" The intercom blared.

Amber covered her ears. Tears squeezed out of her eyes. As soon as the message ended, her hands dropped to her lap.

Alex took one hand, and looked deep into her eyes. "We will find her. And we will find your mom. She has to be somewhere."

"We have to go. We have to save who we can." I'll never forget mom, Karen, and Brandon. I'll find them someday, even though we never found dad.

Chapter 39

Los Alamos, New Mexico

Amber and Alex rushed down the hall.

Corbo pushed Livia in an abandoned office chair.

The meeting room clamor grew as they approached. It spilled down the hallway, increasing in bursts.

As they reached the last corner, it decreased to silence as if someone had shut the door.

Amber dashed into the room.

The projector hummed. It had been set to a map of San Francisco.

A large TV screen blared beside it.

Surely, it was a nightmare, or somewhere else.

Buildings fallen, rubble everywhere. Dust billowed on the screen. Fires roared in the background. Sirens blared and lights flashed.

The scene looked like a nightmare movie. Why had they turned on horror movies, when off base was scary enough?

Those tumbling fiery images could happen here. Or in California.

Amber wanted to wake up at home with Karen, Brandon, and her mom. The pictures turned fuzzy, as tears welled in her eyes.

Amber dropped Alex's hand and ran to the front of the room. The screen mesmerized her.

A hand touched her shoulder.

Amber couldn't turn away. She recognized those buildings. One held her favorite seafood restaurant. Her sixteenth birthday party celebration, the lobsters in the tank, and sliding ocean pictures on the wall. The building tilted at the wrong angle. It shouldn't be sideways. Someone couldn't hold the camera upright.

Amber's hands and legs trembled. A warmth filled her body. She gasped for breath. The room cascaded in and out. It was all so unreal. Her hands slipped across the television, and slid down.

Her eyes blinked. She reached for her aching head. Her leg lifted at a strange angle, and her back was on the floor.

Alex's face was above her. He smiled at her.

"It's okay," he whispered. "You haven't had enough to eat, or sleep."

Someone had clicked the TV off.

General Nord stood nearby, ignoring her and Alex.

Dr. Rebecca pushed chairs over to them.

General Nord pointed to the projector screen. "Earthquakes are increasing elsewhere. It isn't only here."

He turned to the table. "Dr. Rebecca, are the reports in?"

Dr. Rebecca walked up to the screen and pointed. "Our biggest fears have been realized this morning. The last few days have shown an increase in number and intensity of quakes in California."

She paused and looked around the room. "Two of the top geologists from Parkfield were here. Others were going to Colorado, to help monitor the quakes here, the increase in California, and elsewhere in the world."

Dr. Rebecca looked right at Amber. "We don't know how many were left in California. Or are alive."

Amber groaned.

"Right now, this quake, an estimated 8.5, was near the San Francisco bay. Either on the San Andreas Fault, or the Hayward Fault, we may not know for hours."

Dr. Rebecca turned the TV back on and the scenes of devastation filled the room. She walked over to Amber, and rested her hands on Amber's shoulders.

General Nord stepped up. "I am going to have to ask all of you to not make cell phone calls right now. The circuits will overload if we all call at once. We are trying to determine what to do."

"Did my dad and Tom make it to Colorado?" Alex asked.

General Nord turned to him. "Dr. Rebecca?"

"They were scheduled to land in San Francisco before this last quake hit. Perhaps, Alex should call?"

The General nodded at him.

People rustled in the background.

Alex pulled out his phone, and dialed his dad's number.

A wave of relief washed across his face.

Amber listened to his side of the conversation.

"Thank goodness you are safe, and the plane was running late. Where are you? Low on fuel. Not sure if the pilot can make it. Please call as soon as you land." Alex faced the room. "If they run

out of fuel, they will try to land somewhere. They don't know where. That was a long flight across the Pacific. They could be anywhere."

His face turned red.

Amber reached out to him. This would not be an easy day for anyone.

Voices clamored all around them.

The room spun.

Alex whispered something through the din.

Amber grabbed his hand, leaned against his shoulder, and closed her eyes.

Chapter 40

Los Alamos, Valles Caldera, Rio Grande Rift, New Mexico

"Alex, are you sure you don't want to go and meet your father?" Dr. Rebecca said.

His right hand shook as he stared at the fault line map of California. He pointed to a few spots right off the coastline. Disturbance and fluctuation recordings in the underwater, and often forgotten, ring of fire volcanic vents along the coast; had been reported in the last few hours.

Amber came up beside him and took his left hand, still in the sling. She looked up at the map, and nodded. "What if they erupt too?"

Alex turned to Dr. Rebecca. "We need to see the maps at a smaller scale, show the whole coast. Can we find up to date pictures?"

She hurried back to the laptop attached to the projector.

Steaming underwater volcanic vents covered the wall. The California coastline flashed over top, volcanic vents dotted in red along the coast.

Amber pulled out her pillowcase. She folded it to show the volcanoes on, and off, the western coast.

Alex took her hand and pointed. There was more than her grandmother had known about.

Silence descended as the room of experts and town leaders watched.

Alex drew the line in the air, blocking parts of the screen. "If the whole line erupts at once, it could push the plates east, causing the faults to slip, pushing it back west. Common sense says it would create an equilibrium. However, it wouldn't."

He turned to Dr. Rebecca. "How long until Hawaii is inundated by tsunamis from this last quake?"

"Maybe a few hours."

"If a double whammy occurs, it could shift plates throughout the whole country. The waves of tsunamis could affect the whole planet."

News stories of years past, and video of countries drowned by waves that raced around the planet echoed in his memory.

Amber squeezed his hand. "We will survive."

He smiled down at her. "Yes, many of us will. So many won't. Transporting everyone to safety would take time, money, fuel, and resources we don't have."

"We'll rock like toy sailboats, when a cat jumps in the tub," Amber said. "The plates move slowly, often merely millimeters a year, or century. When one big change happens, it pushes the others to extremes. It'll never be the same here, or anywhere, ever again."

Alex's phone chimed. "Hey Dad, where are you?"

"Hi son, we are in Stockton. We won't be here long. Devastation is awful. We want to come out there, to where you are, and skip Colorado. Unless, you come with us."

"I want you and Tom safe. Amber and I have a job to do."

His dad breathed deeply. "Alex, I know you do. I want to be there."

"Your life matters. Please, go somewhere safe."

"There is nowhere safe. I'm coming. If I die, I will die beside my only child, and I won't be alone."

Tears rolled down his cheeks as he nodded. It would be hard for his dad to keep up due to his bad knee. He wanted to see him again.

The room began to shake. Chairs rattled.

Alex dropped to the floor, dragging Amber down beside him.

Lights flickered.

The room went dark.

People screamed.

The light from his open phone shone as crashes sounded outside.

The emergency lights flickered on. Sirens wailed.

Alex peered at his phone. His dad had been cut off. He would be here in a few hours, if all went well.

General Nord shouted.

The crowd calmed.

People struggled to their feet.

"Is everyone okay?" General Nord asked.

The lights flickered on, blinked, and stayed on.

A few trickles of blood splashed on arms and hands of the people near him. People murmured, checking their neighbors.

"Okay, Dr. Rebecca, what can you see?"

Dr. Rebecca took a deep breath and reached to her computer.

It would take a few minutes to reconnect to the Internet. People chattered as they waited.

She clicked through social media sites. Posts flew down the page.

Alex read a few as they flashed by on the screen. He held Amber close.

At last, Dr. Rebecca answered the expectant room. "Potential 8.0 near the Valle's Caldera."

Faces paled. A few miles away, the Valle's Caldera, a dormant supervolcano, slumbered in the desert. Maybe, it dozed no longer.

"Dr. Evan, the geothermal mines, in the caldera, how deep were they?" General Nord asked.

"I don't know the actual depth. They promised they were safe, and hoped the power would make a difference, since green power is required by law now." Dr. Evan sat down next to Dr. Rebecca.

"We have to go see if it caused the faults to shift." Amber said.

More danger. Alex's arm slumped. Data changed too fast to wait on the satellites. "General, we have to go out there. If the rocks between the water table and the lava plume burst. We have to know. It could be hours before the satellites have pictures."

"How long would it take you to know something?" General Nord stared at him.

"A fly around would give us a lot of information. I don't have any equipment with me. We will have to rely on what we see."

"I have a few instruments," Dr. Evan said. "If I can find them."

General Nord looked around the room and sighed. "Fine. I'll have a pilot take you in a helicopter. Be careful. Be back as soon as you can. And, call in any major reports. I won't risk any men, or women, at this point. We need you here to interpret the data." He nodded to a woman in uniform, and pointed to Alex.

She came over to him. "I'm Gina. I'll relief pilot as soon as a helicopter is back. Let's go find what you need."

People and tumbled chairs throughout the building made collecting equipment tedious for Alex, Amber, Gina, and Dr. Evan. It wasn't long until they, and their equipment, were in the helicopter, ready to take off.

Before Gina started the helicopter, she handed them earplugs. "No time to train you how to use the noise reducing headphones."

Alex held his seat tight.

Amber frowned, watching the ground as they rose and flew.

Data they gathered could mean the difference between life and death for the people of New Mexico. Gina would have to be careful flying between trees and near cliffs. If a quake occurred, it could send normally stable trees or boulders crashing into them.

Gina pointed as they flew into the first section of the caldera region.

Alex hadn't been there before, so he couldn't recognize changes. He wished someone had come with them who did know the region. Windy would have known who to send.

He patted Gina's arm, and pointed down, they had to explore it from the ground, and quickly.

She pointed to the southwest.

A few minutes later, they circled an area covered with steaming fumaroles, mud pits, and springs.

Alex held Amber's hand as she stared out the window.

Gina landed.

They jumped out, and hurried to check the composition of the gasses in the air. Several numbers were higher than Alex expected. Though, he had no idea what the normal numbers were for this valley.

On the hike back to the helicopter, they coughed from the gasses emitted from the steaming pits. Mudflows oozed nearby, seeping across the ancient caldera through tiny ruts and cracks.

Amber tapped Gina's arm. "Can we check the Rio Grande Rift area too? It isn't far."

"I am almost afraid to. We need to know. I have to ask permission." Gina pulled out her phone and called. Within minutes, she had General Nord on the line. "Yes sir. Not sure sir. They don't seem too concerned. Okay."

She covered the phone with her hand. "Alex, will you speak with Dr. Rebecca?"

He nodded, and reached his hand out.

"Dr. Rebecca? Seems stable at the moment." He read out the numbers the machine had taken, at least the important ones.

"Amber wants to see the Rio Grande so we can give a full report. Thanks!" He handed the phone back to Gina. His feet shuffled on the uneven ground.

She waited a minute. "Yes sir. First sign of trouble, and we will be right back!"

Amber reached up and hugged him.

A warm glow surged through him as he hugged her back. A safe warmth, not like the boiling inferno that lay beneath their feet.

The helicopter raced the clouds eastward.

Alex surveyed the broken land beneath him. Buildings damaged, roofs fallen in, fences on the ground. Herds of cattle and horses roamed free. Even if the world picked back up where it had left off, many would never return home again.

Alex squeezed Amber's hand. If his dad had landed safe in Colorado, he'd call soon. Or, perhaps he was flying to New Mexico, what was left of it.

At last, they reached the Rio Grande. Where before, it had been reduced to a gentle stream, it was now a raging torrent, waiting to break through the dams, as the engineers had hoped. Trees whipped by currents in the middle of the river struggled to remain upright.

South, the land buckled, with fresh scars. Dirt and boulders piled in fresh mounds, on the east and west banks. Trickles of water formed new streams in places that normally were dry desert, though they may have once been creek beds, millennia before, as the Inland Sea dried up.

Amber reached for her phone, tapped it, and Gina's shoulder. Too noisy to try to talk, they waited while Gina turned around, and raced back to base.

As they touched down, Amber squeezed Alex's hand and smiled at him. As long as he could keep her close, he'd be fine. No matter what Mother Nature chose to do.

Amber let go and sprinted into the building, with Alex a step behind. She reached the door of the empty conference room and collapsed in a seat, giggling. Alex sat beside her and reached for her hand.

"Sorry, couldn't help laughing." She looked up into his eyes, and leaned forward.

He bent down and his lips touched her forehead.

"They should be here any minute," Dr. Rebecca said.

Alex snapped backwards.

Dr. Rebecca stepped around the doorframe. Her hand reached to hide her face, though her eyes couldn't hide the smile.

"They're already in here. Does anyone know where Corbo and Livia went?"

Dr. Rebecca walked into the room, followed by some of General Nord's helpers. She shook her finger at them with a smile, and walked forward. "What did you two see?"

Alex and Amber described the devastation in the caldera and destruction on the Rio Grande. They were almost finished when Dr. Evan entered the room.

He walked up to Dr. Rebecca and whispered something.

She nodded and turned to Alex and Amber. "What you are about to see is top secret. The news would start a panic. The Coco's and Caribbean plates have shifted north. This has pushed the North American plate back into the North Atlantic ridge."

Amber trembled. "It's full of volcanoes. It'll bounce back, and when it does."

"The Atlantic will slosh over the coastlines on both sides," Alex said.

"We have to warn the people. Evacuate the cities." Amber clenched her fists.

Dr. Evan shook his head. "I wish we could. We can only guess what will happen. Not be one hundred percent sure. Imagine the traffic jams, the looting, and the deaths as people try to escape the overcrowded east coast cities. It took almost a day to evacuate for a hurricane. We may not have that much time. And, people won't be so orderly. People at jobs, or on vacation have had no warning, and would want to rush home for belongings and pets."

"So we wait and do nothing?" Amber said.

"With all the nuclear reactors on the east coast, there is no way to move everyone to safety. The whole population of the country couldn't fit into the area where there has been no deformation," Dr. Rebecca said.

She turned on the projector to the worldwide quake-monitoring site. The world map dotted with dozens of high magnitude quakes, and hundreds of low intensity quakes. "This is the last few hours. There is nowhere to go." Dr. Rebecca said.

"General Nord will figure something out. Nuclear plants can be shut down. People can be evacuated at least fifty miles from the reactors. Some people will survive." One of the soldiers said.

"I miss mom. Will I ever see Karen again?" Amber asked.

Where is my dad? Alex held her close.

General Nord walked into the room. "People are scared. We have informed them that evacuating inland, and away from faults, is a good idea."

"Thank you, sir. If we can do anything to help, let us know." Alex said.

"Take care of yourselves. We need you, and your friends." General Nord stared at the projected map. More dots lit up.

Chapter 41

Los Alamos, New Mexico

Amber checked her phone. No new messages from Karen. Anything could have happened after the quake. If Jerry were with her, she wouldn't be alone. Amber dialed her number. It went directly to voice mail. Cell towers would be out all over the region.

The conference room door slammed open.

Corbo pushed Livia in an office chair into the room. He closed the door behind him.

"Sir. I haven't spoken before. Livia's friends. Well, they aren't her friends anymore."

General Nord turned to stare at Corbo. "What did they do?"

Livia pulled her hands down from her face. It was pale against the white blanket around her shoulders. "Josie called. I don't know what's wrong with them!" She hid her face.

General Nord turned to Dr. Rebecca. "Talk to her."

Amber ran to Livia. "Tell me. Whisper if you have to."

Corbo stood strong and waited.

Livia pulled her hands away. "They are picketing outside San Antonio. They'll all die!" She burst into sobs.

Amber grabbed her hand and turned to the general. "Sir these people are misguided. They don't know a thing about science. They are a danger to themselves; and will scare any citizens they find. Can we save them?"

"Have you met them?" General Nord asked.

Amber sat back still holding Livia's hand. "I met Josie and Nathan. They didn't seem bad at the time. From what Livia said, they were the tamer ones of the bunch."

Livia nodded. "Sir, Josie and Nathan were like me, once. Then, they joined this group that has increased pressure to doubt and disbelieve anything known scientifically. They believed their religious ideas were the answer to all questions and problems."

She shook her head. "I never knew much science. It wasn't my favorite subject in school. However, I've seen what Amber and Alex know. These quakes are science problems, not religious. We need

Amber and Alex's answers. I'll change my phone number so they can't call me anymore."

Dr. Rebecca closed her laptop lid. "No. Josie and Nathan would call and worry your parents constantly. General Nord, can we do anything?"

He sighed. "How many people?"

"Three bus loads," Livia said. "If you send someone, I'm going. I have to stop them before they hurt themselves, or anyone else."

"You can't go," Corbo said. "You can't walk far."

"I'll go." Livia said.

Amber squeezed her hand. "We'll all go. General Nord, can you help us?"

The door opened and a soldier walked in and handed a note to General Nord. He nodded at the soldier and read the note.

General Nord sighed. He shook his head and turned to the wall where the map had been a few moments before.

"I have to keep busy. I can't sit here," Amber said. "If you don't send me to San Antonio, send me back to Kirtland to search for my mom."

General Nord placed the paper next to Dr. Rebecca's laptop.

"Kirtland isn't accessible for you now. Neither is San Antonio."

Amber groaned and clutched Livia's hand.

He nodded to the soldier beside him.

"However, the mayor of San Antonio has demanded accompaniment of someone who knows these people. Her efforts to send a rescue team in alone were not fruitful."

General Nord looked at each of them. "Alex, Corbo, are you willing and able to attempt to protect yourselves, and these brave young women?"

Amber blushed. Even though she thought of herself as an adult, she didn't expect General Nord to think of her as such.

"Yes sir." Alex walked over and stood behind Amber. "I will be there."

Corbo nodded. "Don't leave any of us behind."

General Nord smiled. "I understand your fears Corbo. Your situation is being looked into. You will not be left behind, unless you choose to stay."

General Nord turned to the soldier. "Ready Gina, and three other helicopters. They leave in ten minutes."

Hope swelled through Amber. At least by staying busy she wouldn't have time to think about her mom, Brandon, or Karen. She stood up.

The group turned to hurry to the helicopter take off area she and Alex had left such a short time ago.

"Amber," General Nord said.

Amber turned back to him.

"Your mom is tough. Dr. Rebecca knows her well, and says you are just like her. She may not be at Kirtland."

Amber's mind reeled. Where could her mom be then?

General Nord held his hand up. "I've no idea. And if I did, I couldn't tell you."

Alex grabbed her shoulders, and turned her out of the conference room.

They all smiled excitedly as they rushed down the hall.

Outside the door to the helicopter area Amber stopped. None of the pilots had arrived.

"Do you think he knows where she is?" Amber whispered.

Alex shook his head. "I think he knows she went to find Brandon. Or at least hopes so."

"I hope so to," Amber said. If her mom had escaped, she could survive at least as well as Amber.

The door behind them opened.

Gina and the other pilots came out the door, dressed for battle.

Chapter 42

Los Alamos, New Mexico to San Antonio, New Mexico

The drone of the helicopter blades drowned out conversation.

Gina's copilot handed out noise canceling headsets.

Amber checked the headset and put it on.

"You won't be able to speak to people outside the helicopter," the copilot said. "Keep these on while we are moving to hear changes in directions. Can everyone hear me?"

Amber nodded.

Alex, Corbo, Livia, and San Antonio's mayor did as well.

"If an emergency comes up, push this button, and I, or Gina will hear you. We can override you."

Amber nodded again. Good to know.

Amber wiggled, unable to be still. There wasn't much time to save the religious fanatics. If they found and rescued them, maybe Gina would fly a line across the route Amber's mom might have taken to find Brandon. She bounced in her seat with hope.

Alex laughed.

Outside, the scenery slowly changed as they flew down the river. A little less than one hundred and fifty miles by air. The water swirled, with nowhere to go. Trees, brush, and anything caught in its path swept along caught behind the blockade. At least they were far enough up; they couldn't see if the bits were people or animals.

Amber pointed as they came closer to San Antonio.

Three tour buses parked beside the river in a field. A crowd of people chanted and yelled toward the buckled bridge across the river. The bridge they had driven across on the way to Kirtland days before, which Dr. Evan didn't trust.

The mayor of San Antonio sat across from Amber and wrung her hands.

Gina's copilot pointed at their bags.

The helicopters descended.

Amber grabbed her backpack and walking stick. Not much protection if the crowd turned unruly, as they were likely to do.

However, there had been no time for them to learn how to use a more reliable weapon.

Gina sat the helicopter down as gently as she could.

The blades rotated slower and slower.

The door opened and her copilot stepped out. He held his out to San Antonio's mayor.

When the mayor stepped out, the crowd roared.

"Send them away!"

"Give us our river back!"

"Give us our land back!"

The mayor held her hand up and waited for the relative calm that the over one hundred and fifty people gathered on the river's edge would give her. The river's gurgle would not quiet.

The mayor raised a megaphone to her mouth. "Do any of you live in San Antonio?"

Amber stood inside the helicopter behind the mayor.

Alex and Corbo behind her.

A few raised their hands.

"The town has been evacuated for safety reasons. A series of waves will flood through here shortly." The mayor waved her arm.

"Please, return to your buses for an escort to safety."

The protestors screamed and shouted, running towards the helicopter.

Amber gripped her walking stick.

Soldiers stepped out of the other three helicopters and formed a semi-circle around the mayor.

The ground shook.

Amber grabbed Alex's arm.

The crowd paused as if against a brick wall.

Amber, Alex, and Corbo stepped down to the ground beside the mayor.

Livia hobbled to the door.

The river swirled and sloshed over its banks.

"You've come!" Josie shouted. "Come join us. Or have you chosen to join them?"

A section of riverbank slid off into the river, sloshing debris and water onto the crowd.

Nathan stepped beside Josie.

"Please. Go to safety. You have so much to live for. Please go." Livia waved at them with a crutch.

They wouldn't listen to her. Josie and Nathan didn't really know her.

"If you're not going to stop the scientists, then go away," Josie said.

Gina stepped to the door of the helicopter. "This field will be underwater in ten minutes. A quake upriver has burst the dams."

Amber glanced at Alex.

His face was pale.

"Go now." The mayor's voice cracked and as she stepped back into the helicopter.

Amber climbed back in, followed by Corbo and Alex.

The crowd roared and screamed some more.

Soldiers rushed back to their helicopters.

Amber's heart quivered. If Josie and Nathan had tried, they might have been able to convince the group to leave.

They all pulled their headsets on. At least they protected their hearing a little.

Livia's pale faced streaked with tears as she clung to Corbo.

Gina pulled the helicopter up off the ground, and hovered in a circle with the other three.

The crowd yelled and threw stones at the helicopters.

Within moments, the wave appeared on the horizon.

Amber held her breath. The crowd couldn't escape now.

They stopped and stared at the wave. Unmoving.

Over the sound of the chopper's blades Gina's copilot spoke into the headphones. "Anyone else hear the voice?"

"What voice?" Amber said.

"My children and grandchildren will fight no more. What can it mean?" The copilot turned to them and slumped in his seat.

Gina stared at him. Then, she raced ahead of the other helicopters as they returned to Los Alamos.

Amber glanced back one last time.

The bodies of the protesters washed across the plain.

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Thank you for reading Trails: First Generation - Fault Lines. If you enjoyed it, please take a moment to leave me a review at your favorite online retailer and share it on social media. Choose another fiction, or nonfiction, title to explore on your journey through the myths society has encouraged us to live by.

Thanks!

Gail Brown

About the Author

Gail Brown began reading at far too young an age. Her preferred reading material was nonfiction, with biographies and science being at the forefront of her library excursions.

Her ability to memorize and use all the grammar rules in school years led to working in the school library while classmates caught up. All of those rules, and diagramming sentences was easy and relaxing. For many years. All forgotten now. Except the joyful memories of preparing the library for others to use.

Along the way, she found fiction and science fiction to help bring hope and light to a world of colorful dreams. A world where disability was accepted, people lived their lives without overwork and fear.

As an adult, gardening, and preparing the garden bounty, was her way to relax. To think. To make order out chaos.

Other Books by Gail Brown

Concurrent Earths

Concurrent Earths is collection containing 40 short stories of Earth, or almost Earth, that may, or may not, exist.

These stories reach to us across the stars. They share a thought, a dream, or a hope. Stories that touch the heart and soul.

Whether a single individual, a community, or a society, each story delves into specific situations, and how they might benefit society.

Or, how they might go wrong.

Very wrong.

Galataria's Echoes

Galataria survived the Devolution War generations ago. The human population saved the planet. Now they too are on the brink of extinction.

Memories of a war they have never seen cross the dimensional boundary to Kalara and Leonard.

At least, they think the dreams are nightmares of Galataria's past.

For Shalin and Jendal on Earth, the dreams are peaceful and serene. A beauty in life they have never seen.

Dreams bring a bit of both worlds across the unrecognized bridge into the other.

Galataria and Earth are threatened with ideas, and a life most don't recognize, and many fear.

Trails Series

Trails: Pit Miners

Pair 2, Book 1
Trails 3: Tales
Time: 200 years in the future

Pair 2, Book 2
Trails 4: Mines
Time: 210 years in the future

The middens of the ancestors slowly empty. The last few usable pieces are found.

Dangers forgotten emerge from the bottoms of the pit mines. Forgotten fears told as campfire tales.

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The future of the Pit Miners, and the communities beyond that they barely know exist, are at risk.

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